

POLICY PAPER

***On-Campus Infrastructure***

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# Introduction

On-campus infrastructure is the foundation of McMaster. All students, staff, and visitors of the University must pass through the campus, and with that, interact with infrastructure. Without properly functioning infrastructure, people lose access to various aspects of McMaster, whether it be specific buildings, a place to study, or even functioning Internet. The McMaster Students Union (MSU) advocates to support the repair and revitalization of McMaster infrastructure, to ensure that all McMaster community members can fully access education unhindered by physical barriers.

It is imperative that Facility Services works to ensure McMaster is fully accessible. This means that walkways must be safe and easy to use for individuals with mobility aids, that all buildings must have a fully-functioning elevator, and that elevator maintenance must be considered a Priority 1 repair. In addition, Facility Services must conduct a new Campus Accessibility Review, and from that, create a new Campus Accessibility Action Plan to address all gaps found in the Review.

The MSU believes that all residence buildings should be air conditioned. As it stands, only under half of residence buildings are air conditioned, which can pose health risks for students, as well as create a price disparity between rooms in different buildings.

To support proper maintenance of McMaster campus, Facility Services must increase its transparency. This includes publicizing its website, which should serve as a central location for work orders, as well as including a detailed explanation of the priority system used to decide when repairs are completed and expected timelines for various repairs. In addition, students who submit work orders should receive a follow up to know that their repair has been processed and completed.

The MSU is concerned about deteriorating buildings on the McMaster campus, as evidenced by the low Facility Conditions Index (FCI) and high cost of deferred maintenance. As such, McMaster should increase funding to deferred maintenance, and ensure that the FCI of all buildings is considered fair. In addition, the Ministry of Colleges, Training, and Universities should increase funding to deferred maintenance budgets to match that of universities.

McMaster University should ensure that on-campus workspaces are available and functional for all students. Students should be able to study, both individually and in groups, without having to sit on the floor or go off campus. Additionally, students working on campus must have access to basic technological needs such as wireless Internet and electrical outlets.

Lastly, the MSU would like to give input on the planning and implementation of any new residence buildings McMaster builds. The MSU believes new buildings, including

the Main Street West residence buildings under construction in 2018, must be fully accessible by design, including entryways, elevators, garbage disposal rooms, and washrooms. In addition, new residences should include a kitchen for students with severe allergies or medical conditions, who can use the kitchen without worrying about cross-contamination of surfaces or appliances.

# Physical accessibility

Principle: The McMaster campus, including all buildings and pathways, should be physically accessible for all students throughout the year.

Principle: McMaster University should regularly review the physical accessibility of campus and respond to emerging issues.

Concern: The deterioration of campus infrastructure reduces the quality of the undergraduate learning experience, especially for people with physical disabilities.

Concern: McMaster campus roads, walkways and pathways are not effectively maintained, which is a hazard.

Concern: Elevators are often not well maintained or properly functioning. Concern*:* Elevator repairs are not considered Priority 1 in all buildings.

Concern*:* Many entryways lack ramps or automatic doors, making them inaccessible to many

people.

Concern*:* The last accessibility audit of the McMaster campus was conducted in 2012 and expired in 2017.

Recommendation: Facility Services should invest in preventative maintenance on all elevators to minimize the time elevators are out of order.

Recommendation*:* Facility Services should classify broken elevators in buildings with only one elevator as Priority 1, not just elevators in buildings with six or more floors.

Recommendation*:* Facility Services should classify work orders to fix broken automatic doors as Priority 1.

Recommendation: Facility services must ensure that snow, rain and ice is cleared on all major pathways with proper space for mobility devices.

Recommendation: McMaster’s roadways, pathways, and sidewalks should have all potholes and other damages repaired in a timely fashion.

Recommendation*:* Facility Services should perform and publish an accessibility audit of McMaster on a regular basis of approximately 3 years.

Recommendation*:* Based off each triennial audit, Facility Services should create and publish another Campus Accessibility Action Plan and publish annual progress reports on their achievement of these goals

Recommendation: Facility Services should ensure that all pathways and walkways are levelled to make sure that they do not flood during heavy rain.

Recommendation: All residence buildings should be first floor accessible with ramps, and all new residence buildings should have at least two working elevators in accordance with the AODA.

While recent progress has been made, McMaster's campus requires several structural improvements, both in the existence and maintenance of accessible services, before it can be considered fully accessible. Without proper infrastructure maintenance, buildings and pathways which may have been once accessible become difficult or impossible to use for disabled students. Currently, any issues with physical maintenance on campus may be reported through work orders, which have different priority responses, spawning from immediate response to up to ten working days1.

Under this priority system, elevator repairs are only considered to be Priority 1 (a repair to be completed immediately) if they are the only elevator on a building with six floors or more2. Otherwise, “elevator malfunctions” are designated as Priority 2, repairs which may be executed in up to 48 hours3.However, for in a student in a wheelchair, getting to the second floor of a building is equally impossible as getting to the sixth. An elevator repair in 48 hours could mean that a building could be impossible to enter for students with mobility issues for two full days. As such, Facility Services should ensure that all buildings have at least one functioning elevator – consequently, elevator problems on all buildings with one functioning elevator should be considered Priority 1 repairs. In addition, Facility Services must ensure all elevators are consistently maintained and updated to prevent, as best as possible, elevator malfunctions from occurring. Similarly, faulty or absent automatic doors make an entrance completely inaccessible to many people with mobility impairments. Therefore, repair of automatic doors should also be considered Priority 1, and Facility Services should endeavor to automate doors at all entrances.

Facility services does their best to create safe walkways during the winter, nonetheless, there are times when the walkways are not sized appropriately for mobility devices. Currently, the best way to solve this is to contact Facility Services Customer Service Desk at extension 24740 4. However, Facility Services should consider making larger walkway paths as a standard, and not an accommodation. Bad weather should not be a deterrent for students to access their education. In addition, potholes and cracked walkways are both hazardous to students and may make a pathway completely unusable for a student with a mobility aid. As such, these structural failures should be repaired in a timely fashion of approximately 2 weeks to ensure campus is safe and accessible for students.

1 "Work Order Priority Guidelines," McMaster Housing and Conference Services, https://housing.mcmaster.ca/residence‐facilities/work‐order‐priority‐guidelines‐2/ 2 Ibid.

3 Ibid.

4 "Winter Walking on and off Campus," McMaster Daily News, https://dailynews.mcmaster.ca/worthmentioning/winter‐walking‐on‐and‐off‐campus/

A pathway near Lot I, improperly cleared and impassable on a mobility device

The *Campus Accessibility Action Plan,* as provided by the Facility Services website, is based off of an audit completed in 2012 and dated 2012-2017 5. As this timeline has been completed, Facility Services should conduct an additional accessibility audit, to both determine accessibility of campus infrastructure and evaluate the progress made since 2012, including how many of the accessibility goals were met. From this, they should develop another Campus Accessibility Action Plan, detailing how Facility Services intends to make McMaster fully accessible, including specific timelines for all steps. Facility Services should then annually publish progress made on the Accessibility Action Plan, to ensure maximum transparency to students. In the future, Accessibility Audits should be completed every three years, to ensure Facility Services has recent, accurate data with which to improve accessibility on campus.

# Air conditioning

Principle: All students should have the right to live in a comfortable and healthy environment. Principle: All students should be entitled to residence rooms of a similar quality.

Concern: During warmer months, such as September or April, the temperatures in residence buildings are often far above comfortable levels.

Concern: Unrelenting heat poses a potential health risk for students.

Concern: Pricing of residence rooms is not reliant upon air conditioning, meaning that a room with air conditioning could cost the same as a room without.

Concern: Adjusting heat and cooling levels for individual buildings is often impossible, meaning that some buildings are unbearably warm or cold in cases of unexpected weather.

Recommendation: Air conditioning should be implemented into all existing and future residence buildings.

5 “Campus Accessibility Plan,” McMaster Facility Services, <http://facilities.mcmaster.ca/documents/Campus%20Accessibility%20Plan.pdf>

Recommendation: In the interim, Residence Life should provide more fan rentals at the Commons and Mary Keyes service desks.

Recommendation: Air conditioning installation should be installed in all common areas, expanding on the current Residence Life initiative to air condition larger common rooms.

Recommendation: Facility Services and Housing and Conference Services should separate the heating systems of residence buildings, so they may be individually adjusted according to the weather.

According to Environment Canada, climate change-induced temperature increases in the City of Hamilton have caused warming by around two degrees in the past thirty years6. This past summer, the number of days where the temperature in Hamilton exceeded 30 degrees was more than double the summer before, with the highs reaching around 6 degrees warmer than the average7. Indeed, Health Canada has predicted that the number of hot days is likely to double in the near future8. Rising temperatures have lead the City of Hamilton to consider lowering the number of months that landlords are required to keep buildings at a minimum of 20 degrees in cooler months9. It is therefore apparent that old laws and regulations, created in a pre-climate change world, are no longer suitable to protect tenants in an increasingly warm Hamilton.

Heat is also nearly impossible for students to deal with on their own: if a residence building is too cold, students can dress warmly and wear blankets. However, no such option exists to deal with the heat10. McMaster Housing Services recommends students bring fans, which are both expensive and difficult to transport, meaning that they are inaccessible to many who live in residence11. In addition, in many residence rooms limit the extent to which a window may be opened is limited, which limits air flow in a room and can make it warmer. While Residence Life does offer some rental fans, there are not nearly enough for every non-air conditioned room at McMaster.

6 Carmela Fragomeni, "Hamilton Public Health Issues Extended Heat Warning," The Hamilton Spectator, July 01, 2018, accessed October 2018, [https://www.thespec.com/news](http://www.thespec.com/news)‐story/8705324‐hamilton‐public‐ health‐issues‐extended‐heat‐warning/

7 Ibid.

8 Laura Wright, "Should Landlords Be Required to Provide Air Conditioning during Heat Waves?," CBCnews, August 15, 2016, accessed October 2018, [https://www.cbc.ca/news/canada/should](http://www.cbc.ca/news/canada/should)‐cooling‐ be‐required‐during‐heat‐waves‐1.3719006

9 Carmela Fragomeni, "Hamilton Public Health Issues Extended Heat Warning," The Hamilton Spectator, July 01, 2018, accessed October 2018, [https://www.thespec.com/news](http://www.thespec.com/news)‐story/8705324‐hamilton‐public‐ health‐issues‐extended‐heat‐warning/

10 Ibid.

11 "Heating and Cooling Tips," McMaster Housing and Conference Services, accessed October 2018, https://housing.mcmaster.ca/residence‐facilities/room‐and‐building/heating‐and‐cooling‐tips/.

An increased bank of rental fans can serve to mitigate detrimental effects of heat while air conditioning is being installed.

Uncomfortably hot residences may also impair students’ abilities to concentrate or make decisions, which may impair academics12. The first year of university is extremely difficult for many students, who must deal with academics, extracurriculars, leaving home for the first time, and many other stresses, and having their cognitive abilities compromised should not be to this mix. Being in first year and adjusting to stress levels and workload with a combination of uncomfortable living conditions fails to promote student success and health, and rather serves exacerbate student stress. Extreme heat conditions, especially for students with medical conditions, such as asthma or COPD, can affect breathing and lead to heat cramps, heat exhaustion, and heat stroke 13 14. Many students felt adverse effects of unrelenting heat firsthand Welcome Week 2018, some reporting with symptoms of heatstroke, including vomiting.

Only five out of twelve residence buildings on campus have air conditioning 15. The buildings that do have air conditioning, Brandon Hall, Hedden Hall, Woodstock Hall, Les Prince Hall, and Mary E. Keyes Residence, have the same fees as comparable rooms in buildings without air conditioning, Bates Residence, Edwards Hall, Moulton Hall, McKay Hall, Wallingford Hall, Mathews Hall, and Whidden Hall, as pricing is based on room type, not residence amenities. For instance, a traditional double room in Brandon, which is air conditioned, is the same price as one in Edwards, which is not16. Students do not rooms with air conditioning to be considered an additional amenity that students should pay a premium for, especially considering the adverse health effects a lack of a proper cooling system may cause. Instead, to resolve this disparity, McMaster University Conference and Housing Services must ensure all residence rooms come with air conditioning.

12 Adrian F. Ward, "Winter Wakes Up Your Mind‐‐and Warm Weather Makes It Harder to Think Straight," Scientific American, February 12, 2013, accessed October 2018, [https://www.scientificamer](http://www.scientificamerican.com/article/warm)ican.com[/article/warm](http://www.scientificamerican.com/article/warm)‐weather‐makes‐it‐hard‐think‐straight/.

13 "Heat and Humidity," The Lung Association, December 10, 2016, accessed October 2018, https://[www.lung.ca/news/expert](http://www.lung.ca/news/expert)‐opinions/pollution/heat‐and‐humidity.

14 Carmela Fragomeni, "Hamilton Public Health Issues Extended Heat Warning," The Hamilton Spectator, July 01, 2018, accessed October 2018, [https://www.thespec.com/news](http://www.thespec.com/news)‐story/8705324‐hamilton‐public‐ health‐issues‐extended‐heat‐warning/

15 "Heating and Cooling Tips," McMaster Housing and Conference Services, accessed October 2018, https://housing.mcmaster.ca/residence‐facilities/room‐and‐building/heating‐and‐cooling‐tips/.

16 "Double Room ‐ Traditional," McMaster Housing and Conference Services, accessed October 2018, https://housing.mcmaster.ca/double‐room‐traditional/.

# Facility Services Transparency

Principle*:* McMaster Facility services should be transparent in the way it prioritizes what needs repair.

Principle*:* McMaster Facility services should be easily accessible to students.

Concern*:* The McMaster Facility services website, including information on long-term repair priorities, is very difficult to find.

Concern*:* Without the proper information, students have no way of knowing when repairs can be expected to be completed.

Concern*:* When a work order is placed, there is no follow up or response to the person who submitted it.

Concern*:* Facility Services’ current priority system for long-term repairs does not state a time frame for recommended repairs, those which are not critical to the functioning of the building.

Concern: Facility Services’ website is not search engine optimized.

Recommendation*:* The Facility Services website should detail its priority system for all repairs.

Recommendation*:* The Facility Services website should include a link to work orders for students that includes updates on current repairs.

Recommendation: Facility Services should keep a log of work orders similar to the one used by McMaster Security Services.

Recommendation*:* When a work order is placed, the sender should receive a response indicating the expected timeline for repairs.

Recommendation: McMaster University Facility Services should employ common Search Engine Optimization techniques in order to improve the accessibility of their website.

Facility Services has listed transparency and feedback from stakeholders as key priorities in their strategic plan17. As such, there are several avenues Facility Services could take to increase transparency, make its services more available, and collect input from students and other stakeholders.

Currently, the Facility Services website is extremely difficult to find. A Google search for “Facility Services McMaster” does not show the facilities.mcmaster.ca website, rather it provides links to Housing and Corporate Services. As such, people may not

17*Facility Services Strategic Plan*, report, Facility Services, McMaster University, August 2017, accessed October 2018, <http://facilities.mcmaster.ca/documents/strategicPlan2017.pdf?fbclid=IwAR1SGv4ezyzpi5LrebMcs>‐ JeiMt4sb2x2MmWwGtUIiSpZxzFCEl90F6a5‐4.

know Facility Services has a website, and if they do, they may not know how to find it. Facility Services should therefore search engine optimize their website, including ensuring that a link to the website is provided in all related McMaster websites to increase its visibility. This serves the double purpose of directly redirecting people who are on related McMaster pages, while also increasing the likelihood of the page appearing on a Google search.

The form for filling out work orders is also difficult to find. A search for “work order McMaster” provides links to residence work orders and work orders for specific sections of campus, but none of these links are through Facility Services. This makes it extremely difficult for people who are trying to submit a work order; the plethora of forms with little guidance may cause confusion and people may fill out the wrong forms. In addition, most methods of submitting a work order on various McMaster websites are aimed at students in residence, and are unavailable for anyone off residence wishing to report repairs in other buildings18. As such, Facility Services should provide one centralized work order form on their website. If work orders become available through a portal on Mosaic, as is planned, the Facility Services website should include a direct link to the page, or provide instructions on how the page may be found.

Once the Facility Services website is easily accessible, it can help to greatly increase Facility Services’ transparency. For instance, if, in accordance with the strategic plan, Facility Services publishes their Key Performance Indicators (KPIs); they could be available on their website to ensure maximum visibility and accessibility to students. Another goal in the Facility Services strategic plan is to implement “How did we do” cards in administrative buildings on campus. To extend this goal and continue increasing accessibility and transparency, a virtual card should be both available on the Facility Services website and sent to anyone who submits a work order. In addition, Facility Services could include a log of completed repairs, similar to the Security Services previous system “Crime Beat”19.

Facility Services uses a tiering system with five different levels to determine what repairs are prioritized and how quickly they are carried out. However, when a work order is submitted, this information is not communicated to the person who submitted it. In addition, people who have submitted work orders are not notified when a repair is completed, and do not receive confirmation that the order has been processed. After the submission of a work order, Facility Services should follow up with the sender, both to confirm its receipt and to provide an estimated timeline of repairs. Facility Services should then contact the submitter when the repairs have

18 "Work Order Priority Guidelines," McMaster Housing and Conference Services, https://housing.mcmaster.ca/residence‐facilities/work‐order‐priority‐guidelines‐2/

19 “Crime Beat,” McMaster Security Services, https://security.mcmaster.ca/crime\_beat\_current.html

been completed. This will increase the transparency of Facility Services’ operations. In addition, as it stands, very little information can be found about how repairs are placed into their respective levels or what the rationale was behind these decisions. The only explanation is that repairs are based on “the seriousness of the problem20.” There is also a lack of a defined timeline given for repairs in priorities 4 and 5, with the only indication of date being that it will be not greater than ten business days.

Facility Services should expand their explanation of the ranking system, so people can understand which category a desired repair falls into and follow up on repairs that are not completed within the expected timeline. For this to occur, more detail on the timeline of a repair should be provided for Priority 4 and 5 repairs.

# Deferred maintenance budget

Principle: McMaster University buildings should be properly maintained and updated so they enhance, rather than detract from, student life.

Concern: Many buildings on campus are in desperate need of repair, including to crucial heat and electrical systems.

Concern: The current deferred maintenance backlog is extremely high, at a total of 270 million dollars.

Concern: The current maintenance spending is well below the industry standard of 1.5% of Current Replacement Value (CRV).

Concern: The current status of deferred maintenance on campus is inaccessible, contributing to a perceived lack of transparency.

Concern: McMaster’s list of critical deferred maintenance projects, which by definition should be addressed within a year, continues to grow since projects go unaddressed.

Concern: Poor maintenance of infrastructure and buildings negatively impacts academic experience and research opportunities.

Concern: The average Facility Conditions Index (FCI) for all McMaster buildings is 15%.

Concern: The Ministry of Training, Colleges, and Universities (MTCU) currently only provides universities with approximately $2-$4 million per year in funding for deferred maintenance.

Concern: Some MTCU funding is restricted to projects which the ministry chooses.

Recommendation: MTCU should increase funding to universities for deferred maintenance to at least 10 million dollars, matching yearly contributions from universities.

Recommendation: MTCU should provide more general grants for deferred maintenance, rather than mandating universities to focus on particular projects.

20 "Work Order Priority Guidelines," McMaster Housing and Conference Services, https://housing.mcmaster.ca/residence‐facilities/work‐order‐priority‐guidelines‐2/

Recommendation: McMaster University should budget, at a minimum, 15% more for deferred maintenance every year ($1.53 million for the 2019/2020 fiscal year) until funding reaches the industry standard of 1.5% of CRV.

Recommendation: Facility Services should publish their annual Asset Management Report on their website to maintain transparency about deferred maintenance progress.

Recommendation: The FCI for every individual building should be 10%, or “fair”.

Recommendation: McMaster University should create a Campus Infrastructure committee with representatives from Facility Services, the University Budget Committee, and the McMaster Students Union to strategically address deferred maintenance and FCI related projects and priorities.

Deferred maintenance refers to all maintenance related projects that are delayed – typically to another fiscal year – until funding becomes available. The primary responsibility for deferred maintenance lies within the Institutional Budget.

McMaster’s 2018/2019 Consolidated Budget report indicates that the current backlog in deferred maintenance of infrastructure and buildings, excluding residences, is

$270 million. The accumulation of critical priorities in 2017 totalled $136 million, with

$13 million now dedicated annually for these projects through funding from the University’s Operating Fund and the MTCU. In comparison, Western’s deferred maintenance backlog, for a much larger campus (Western’s campus is 455 hectares21, in comparison to 121 hectares at McMaster22), is $210 million, with $15.5 million dedicated to maintenance in 2018/201923. With 61% of buildings in fair to poor condition24, McMaster’s high deferred maintenance backlog significantly impacts the quality of education for students, faculty, and staff25.

As this backlog grows, unscheduled urgent maintenance and outages will likely increase in frequency and severity, disrupting students. In order to prevent this from happening, industry standards suggest the reinvestment in capital (i.e., deferred maintenance) to be 1.5% of the Current Replacement Value (CRV) 26. The CRV refers

21 A Beautiful Campus, webpage, Western University, accessed October 2018, [http://welcome.uwo.ca/top\_10/beautiful\_campus.html.](http://welcome.uwo.ca/top_10/beautiful_campus.html)

22 McMaster Fast Facts, webpage, McMaster University, accessed October 2018, [https://www.mcmaster.ca](http://www.mcmaster.ca/opr/html/opr/fast_facts/main/about.html)/[opr/html/opr/fast\_facts/main/about.html.](http://www.mcmaster.ca/opr/html/opr/fast_facts/main/about.html)

23 2018-19 Operating and Capital Budget, report, Western University, accessed October 2018, https://provost.uwo.ca/planning\_reports/2018\_19\_budget.pdf.

24 2018/2019 Consolidated Budget, report, Board of Governors, McMaster University, accessed October 2018, [https://www.mcmaster.ca/bms/pdf/2018-19\_budget.pdf.](http://www.mcmaster.ca/bms/pdf/2018-19_budget.pdf)

25 2016 Facility Asset Management Report, report, Facilities Management and Planning, University of Ottawa, accessed October 2018, [https://www.uottawa.ca/faci](http://www.uottawa.ca/facilities/sites/www.uottawa.ca.facilities/files/asset_management_report_2016_fin)lities/[sites/www.uottawa.ca.facilities/files/asset\_management\_report\_2016\_fin](http://www.uottawa.ca/facilities/sites/www.uottawa.ca.facilities/files/asset_management_report_2016_fin) al\_english.pdf.

26 Ontario Universities’ Facilities Condition Assessment Program, report, Task Force of the Council of Senior Administrative Officers and the Ontario Association of Physical Plant Administrators, Council of Ontario Universities, March 2016, accessed October 2018.

to the cost required to create a similar building with like materials in accordance with current market prices. In May 2017, McMaster’s CRV was approximately $2.07 billion, therefore, maintenance spending should now total approximately $31 million annually27. However, spending remains well below this, at approximately $13 million annually. While the MSU understands that $31 million is a large percentage of the operating budget, and it might therefore be difficult to achieve such an increase, it is important that McMaster aims to reach as close as possible to this as soon as possible. With a $13 million annual maintenance spending and inflation, the critical maintenance backlog will only be reduced to $70 million by 2027, still a concerningly high figure. The relatively low spending on deferred maintenance perpetuates the cycle of high priority projects increasing because only those that are critical are addressed. Those that are lower priority are backlogged until they become critical.

The least critical projects, such as ugly paint or worn out carpets, can rarely be addressed with Facility Services prioritizing them, affecting the reputation of the school. To address all these concerns, McMaster should, in the interim, increase maintenance spending by 15% annually to work towards the industry standard of maintenance spending equating 1.5% of the CRV. In order to create a sustainable long term plan to reach this 1.5% of CRV goal, Facility Services should update and publicize their Asset Management report annually (the one on the website is still from 2012) and suggest budgeting strategies similar to that outlined by the University of Ottawa in their 2016 Asset Management Report.

The MTCU should also help universities reach industry standards of 1.5% of the CRV by increasing their deferred maintenance contributions to match each university’s – this will encourage universities to prioritize deferred maintenance projects. MTCU should give more grants that do not come with any stipulations on where it must be spent. This will allow universities to prioritize spending it where most necessary and appropriate.

The Facility Condition Index (FCI) is a tool used to help determine the condition of buildings. It is calculated by dividing the cost of maintenance by the cost of replacement, which illustrates the cost of repair in relation to the cost of the entire building28. An FCI of 10%, meaning that repairs to a building are estimated to cost 10% of the overall cost of that building, is considered to be fair29. Currently, the average FCI for all McMaster buildings is around 15%, or poor30 31. In addition, this

27 Five Year Capital Plan, report, Facility Services, McMaster University, accessed October 2018, [http://facilities.mcmaster.ca/documents/2018%20Capital%20Plan.pdf.](http://facilities.mcmaster.ca/documents/2018%20Capital%20Plan.pdf)

28 "School Facility Condition Index," Ontario Ministry of Education, August 24, 2016, , accessed October 2018, [http://www.edu.gov.on.ca/eng/parents/fci.html.](http://www.edu.gov.on.ca/eng/parents/fci.html)

29 Sean C. Rush, Managing the Facilities Portfolio: A Practical Approach to Institutional Facility Renewal and Deferred Maintenance (Washington, DC: National Association of College and University Business Officers, 1991). 30 Ibid.

figure includes new buildings on campus, such as L.R. Wilson Hall or the Michael DeGroote Centre for Learning (MDCL), which are in very good condition and therefore drive down the average32. As such, McMaster University should ensure that all buildings on campus are in fair condition, or have an individual FCI of at most 10%.

Lastly, McMaster University should ensure there is accountability for deferred maintenance projects by creating a Campus Infrastructure committee. This committee should include representation from Facility Services, the University Budget Committee, and the MSU in order to ensure that deferred maintenance and FCI are both prioritized and projects are chosen in a manner that reflects the needs of students. This will help McMaster commit to reducing the deferred maintenance backlog, prioritize the revitalization of campus infrastructure, and increase transparency in its deferred maintenance projects.

# On-campus workspaces

Principle: All students at McMaster University should have access to comfortable, fully- functional workspaces.

Principle: All classrooms should have infrastructure that are conducive to a productive learning environment.

Principle: As a university with a focus on problem-based learning and inquiry, there should be an adequate number of spaces that accommodate group work.

Principe: Students should be easily able to find a place to study while on campus. Principle: Strong and reliable wifi should be available across campus.

Concern: During peak periods, workspace in libraries and elsewhere are often full. Concern: Many classrooms and lecture facilities have broken seats and tables.

Concern: Wireless internet access is unavailable or slow in many locations. Concern: Many campus workspaces, including libraries, have no access to electrical outlets.

Concern: There is a severe shortage of group study and project rooms available for booking despite the high prevalence of mandatory group work in all faculties.

Recommendation: Facility services should ensure that WiFi is available from all

locations in campus libraries, including upper floors of Mills Library and Thode Library where students have particularly difficulty accessing it.

31 Annual Financial Report 2016‐2017, report, Financial Affairs, McMaster University, accessed October 2018, https://[www.mcmaster.ca/bms/pdf/fs\_afr\_17.pdf.](http://www.mcmaster.ca/bms/pdf/fs_afr_17.pdf)

32 Ibid.

Recommendation: The University should introduce a self-reporting tool for network users to give feedback about the network, such as locations of “dead zones”.

Recommendation: The University should do a space audit across campus buildings to find opportunities to increase study spaces outside of libraries.

Recommendation: To support a growing student population, McMaster University should create more student workspaces on-campus.

Recommendation: McMaster University should implement more compact bookstacks in all libraries to increase student study spaces.

Recommendation: McMaster University should create more group project/study rooms on campus.

Recommendation: McMaster University should repair all broken outlets on campus.

Recommendation: McMaster University should offer more outlets in libraries, as well as ensuring that there are several functional outlets available in all lecture halls.

Recommendation: McMaster University should work to renovate existing classrooms and buildings to the same usability standards as new ones.

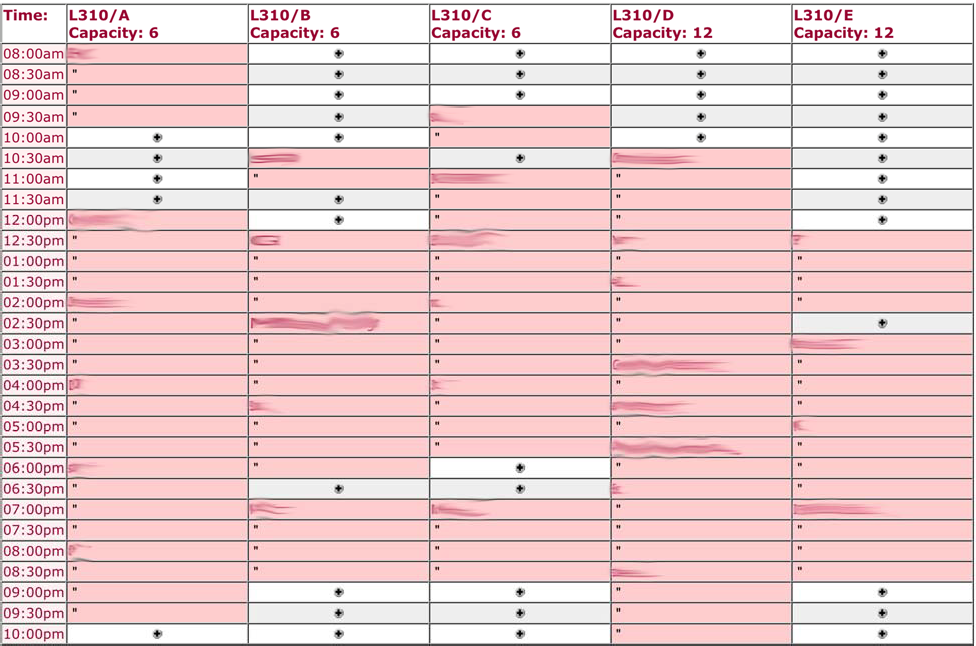
Recommendation: McMaster University should publish the results of the student feedback survey on classrooms and illustrate how they will respond to this feedback.

Pursuing a university degree requires significant time and effort. Each week, students at McMaster complete many hours of coursework to supplement in-class learning.

Physical infrastructure plays a large role in this; the McMaster campus is predominantly where students work, collaborate, and learn. McMaster University should therefore commit to ensuring that its facilities are comfortable and available to use for all students and faculty, working to renovate outdated spaces and reduce overcrowding.

Many courses incorporate group projects into their curriculum. Oftentimes, a significant portion of a course grade comes from group work. It is essential that there is sufficient space on campus for group work and projects to take place. As it stands, there are under 15 group study rooms available to all students for booking in the McMaster Libraries system. The rooms in McMaster Libraries are often full beyond measure, visible in a screenshot of the room booking webform33.

33 "Study Room Booking System," McMaster Library, accessed October 2018, https://library.mcmaster.ca/mrbs/.



*Screenshot dated October 25th, 2018, showing the state of room bookings in Mills Library ten days in advance. Names of groups who booked rooms have been blurred to respect their privacy.*

While there are more rooms available in areas such as the Gerald Hatch Centre, L.R. Wilson Hall and the Health Science Library, these are reserved for students within a certain faculty and are unable to be booked by everyone. For a student population the size of McMaster, the number of study spaces accessible to everyone is very small. Especially for a university with a focus on inquiry-based courses involving group work, it is imperative that more group study rooms be constructed.

Every student at McMaster is required to do work, whether it be review, readings, general study or assignments, outside of lecture time. As such, it is essential that all students have adequate space to complete coursework. A variety of workspaces should be offered, ranging from a lounge atmosphere (couches, small tables) to silent study areas with outlets, chairs and desks. This way, students can find the space that works best for them, setting them up for academic success. On a typical day, it takes a very long time to find a seat in the library, especially during midterm or exam periods. For instance, there are often no seats available in the Health Sciences Library during school hours, causing many students to sit on the ground to study. In a survey conducted to inform the construction of the new Student Activity Building

(SAB), students indicated a need for an increased number of non-faculty specific study spaces34.

There are several possible methods by which to increase study space on campus. For instance, much of the space which exists on campus has the potential to be turned into workspace. The lobby of L.R. Wilson Hall is an excellent example of this; there is functional workspace of different styles scattered throughout the area. The lobby is visually appealing and functional for its intended use, yet provides a number of workspaces for students to use. It is recommended that McMaster University conduct a space audit across campus buildings to determine the best way to make use of available space on campus in terms of student study space.

In order to increase study space in libraries, McMaster University should implement more compact bookstacks, like the ones in upper floors of Mills Library. This would be particularly useful in Health Sciences Library, and Innis Library. This can conserve library space used by books, freeing up more space for students to study.

Over time, the role technology plays in higher education is becoming more important.

Now more than ever, people are using their computers, tablets and smartphones to take notes, access digital educational resources (e.g. textbooks), and communicate with professors and peers. As such, access to electrical outlets has become an essential service on campus. Currently, many outlets in workspaces such as libraries are broken, providing no electricity. It is recommended that the University fix these outlets, allowing students to make use of them. Additionally, there are many workspaces on campus without electrical outlets at all. In order for students to access course resources and assignments on their devices, electrical power is absolutely necessary. There is also a need for outlets in lecture halls, given that many people take notes with a tablet or laptop computer. The SAB survey indicated that students found outlet access in both study spaces and lecture halls to be lacking35. It is recommended that the university install outlets in as many places as possible, allowing students to charge and use their devices. Wireless Internet Access, colloquially known WiFi, is another essential component of learning in the 21st Century. WiFi should be accessible and reliable everywhere on campus, allowing students to access information and communicate over the internet. Currently, many spots on campus have slow or spotty WiFi, including the upper floors of Thode Library, the basement areas of many buildings, the Arthur Bourns Building (ABB), and many other locations 2 . In an age where course documents, data, and

34 *SAB Space Allocation Ad-Hoc Committee: Final Repor*t, report, SAB Space Allocation Ad-Hoc Committee, McMaster Students Union, October 29, 2018, accessed November 2018, https[://www.ms](http://www.msumcmaster.ca/governance/sra/sra-documents)umc[master.ca/governance/sra/sra-documents.](http://www.msumcmaster.ca/governance/sra/sra-documents)

35 Ibid.

assignments are posted online (such as on Avenue to Learn), having fast and reliable WiFi is essential.

McMaster University’s campus includes buildings as old as University Hall (constructed in 1929)36], and as new as the Gerald Hatch Centre (constructed in 2017). As a result, buildings are in various conditions, each with different design standards which reflect the era in which they were built. In many of the older and mid-century buildings, such as Togo Salmon Hall, full lectures, tutorials, seminars and labs often have broken seats, tables and upholstery. Meanwhile, lecture halls in buildings such as L.R. Wilson and the Michael DeGroote Centre for Learning and Discovery, have wide desks, comfortable seating and excellent audio-visual equipment. In September 2018, McMaster University Facility Services released a survey to all students via email, asking them to give feedback on classroom facilities. This is an excellent start towards identifying the rooms in most dire need of renovation. Facility Services should publish this report as well as their plans to respond to student needs. Principally, existing buildings should be held to the same design standards as new ones, being renovated where needed to match modern comfort and design standards.

A chair which has fallen apart in Togo Salmon Hall.

# New residence priorities

Principe: All new residence buildings should be provide a quality standard of living for students.

Principle: All students should have equitable access to all areas of residence buildings, regardless of ability.

Principle: Students should be extensively consulted on large-scale design projects, including new residence buildings.

36 "Our History," McMaster Faculty of Humanities, accessed October 2018, [https://www.humanities.mcmaster.ca](http://www.humanities.mcmaster.ca/about/our)/[about/our](http://www.humanities.mcmaster.ca/about/our)‐history.

Principe: Students with allergies living in residence should be able to have a space where they are able to cook food without fear of contamination.

Concern: Due to food allergies, some students may not be able to use or even enter kitchens containing allergens.

Concern: Currently, many buildings have the only accessible entrance at an inconvenient location, forcing those using mobility aids to take an indirect route.

Concern: Garbage disposal rooms in residences are often inaccessible to people using wheelchairs.

Concern: There is no requirement for students to be on the design committee for large-scale design projects.

Recommendation: McMaster University should ensure that there is an allergy-friendly kitchen space in future residences.

Recommendation: All entrances in future residences should be accessible for students with mobility aids.

Recommendation: Future residences should include at least 2 serviced and functional elevators at any point in time.

Recommendation: All students should have access to a close accessible garbage disposal room.

Recommendation: All floors must have washrooms and showers physically accessible to all students, including those requiring wheelchairs or with other mobility impairments.

Recommendation: There should be two MSU representatives on the design committee for any large-scale infrastructure projects, the Vice-President (Finance) and the First Year Council Chair.

As McMaster continues to work towards providing a residence room to all students who desire one, it is important that they consider students unique needs when developing them, which include the accessibility of the buildings.

Residence buildings contain many communal kitchens for students to use. These kitchens are used by multiple people, and, in most cases, an entire floor of a residence. Consequently, students may use common allergens, such as peanuts or gluten, in these communal kitchens and inadvertently leave contaminants on surfaces such as countertops, stovetops, or the refrigerator. For students with severe allergies or medical conditions, this can mean that using the kitchen could result in allergic reactions or celiac flare-ups. To prevent this, the new residence building should contain a kitchen where common allergens, as well as any specific allergens requested by students, are prohibited from the space.

In the creation of this new building, McMaster has the opportunity to make it accessible by design, rather than retrofit it to make it accessible. Consequently, the building should be entirely accessible for students using mobility aids. This includes making sure that all entrances have ramps and automatic doors, as well as building at least two elevators. In addition, garbage disposal rooms, bathrooms, and showers must be accessible for students with mobility impairments.

Finally, McMaster University should ensure that student voices are heard in the creation of any new buildings, or on any other large-scale infrastructure projects. To accomplish this, two MSU members, the Vice-President (Finance) and the First Year Council Chair should sit on any design committees for future building projects.