



# Campus Accessibility Action Plan

Phase 2 (2018-2023)

## FACILITY SERVICES



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## 1. Background

In April 2012, an audit of the McMaster campus was conducted by Facility Services to assess its degree of accessibility. The scope of the audit was very specific; to review the existing conditions of the campus entrances, interior corridors, public washrooms, fire alarm systems, elevating devices, and drinking fountains based on current code requirements or best practices. This scope addressed most of the current accessibility requirements. This audit did not address off-campus buildings.

The results of the full audit helped guide Facility Services and the McMaster Accessibility Council (MAC) in establishing priorities for capital funding investments in order to provide an accessible campus and comply with the AODA.

The audit found a required investment of \$32million out of which \$28 million were for elevators. The proposed new elevators and ramp access to certain administrative buildings were considered a second priority. A prioritized multi-year plan was created after consultation with the campus community to address all of the requirements, which was called the Campus Accessibility Action Plan (CAAP) 2012-2017. This plan was approved by the Planning and Building Committee with a commitment of \$334,000 per year for a five (5) year term for the Academic buildings. The CAAP 2012-2017 also included 10 year plan for the Residence with a budget of \$100,000 per year for a 10 year period (2012 – 2023).

The accessibility improvements that were achieved as part of the CAAP (2012-2017) are as follows:

1. Provided at least one access to the exterior doors of the buildings by building a ramp at the entrance
2. Provided assisted access to the exterior door of a barrier free entrance to the building by providing automated door operator
3. Provided at least one barrier free washroom facility in a building
4. Upgraded fire alarm notification by providing visual fire notification (strobes) to assist individuals who have difficulty hearing bells or sirens in public washrooms
5. Provided voice annunciation and incorporated the use of braille on all elevators on campus
6. Provided at minimum, one barrier free drinking water fountain in every building.

### 1. New CAAP 2018-2023

Appendix A provides a 2018 updated audit for the 2012 audit. This audit once again includes all of the elevating devices as per the 2012 audit and includes an expansion /improvements on the six prioritized areas highlighted in the background section above. The cost for all accessibility improvements is estimated at approximately \$29.635 million. Appendix B provide the list of the recommended work for CAAP 2018-2023, which total to \$3.025million. The following sections provide detailed discussions on the prioritized and recommended work that is included in CAAP 2018-2023.

Planning for 2018-2023 CAAP has continued to consider elevating devices to be a non-urgent priority except on the ADL building where users have asked for it and they are contributing to the cost. CAAP 2018-2023 expands on the six priorities for 2012-2017 as in the background section above and continue to expand on them. Only the new audit has revealed one new priority, which is the barrier free path of travel inside buildings. The CAAP 2012-2017 is referred to as CAAP phase 1 and the CAAP 2018-2023 is referred to as CAAP phase 2 in this report.

## **2.1 CAAP Phase 2 Priorities Discussion**

### **.1 Academic/Administrative Buildings**

#### **1.1. Building Entrances (Ramps) and Automated Door Operators**

As part of the accessibility improvements in CAAP phase 1, most campus academic buildings currently have at least one fully accessible entrance from the exterior. Fully accessible was deemed to be when every exterior entrance to a building is accessible at ground level for individuals with mobility issues and the exterior entrance door is equipped with an automated door opener. There are multiple exterior entrances to buildings, and many of them are frequently used due to its proximity to other buildings. These additional entrances are in many cases not accessible and persons with mobility needs often have to travel a roundabout way to reach their destination. Providing new ramps and automated door operators at the frequently used entrance points will improve the overall accessibility of the campus.

#### **1.2. Adding Elevating Devices**

Some campus buildings were not designed with elevators. Making every interior corridor accessible is a priority for the CAAP and in order to achieve that, the buildings will have to be retrofitted with elevating devices or ramps where feasible. Though accessibility to all floors of all buildings is a recommended minimum accessibility requirement, it is believed that the unique function and design of the buildings that currently do not have elevators, coupled with the functional profile of the rest of the campus buildings will allow the postponement of the installation of vertical conveyance to a later phase of this project. However, the CAAP phase 2 plan is proposed to include retrofitting the Applied Dynamics Lab building with a barrier free elevator. This will be a cost sharing initiative with the Faculty of Engineering.

#### **1.3. Public Washrooms**

CAAP phase 1 focused on providing at least one barrier free washroom in each building. The existing washrooms that are labelled as barrier free are in many cases outdated and non-compliant to the current building code. They do not meet the turning radius requirements, do not have automated door operators, and the fixtures are not mounted to

the accessible height requirements. Creating an additional barrier free washroom compliant to current codes at a different floor level will be beneficial for the people with disabilities on campus.

#### 1.4. Fire Alarm Systems

Older fire alarm systems were designed to provide audible notification of fire or potential fire to building occupants. New codes and regulations require the use of visual and audible notification to building occupants. CAAP phase 1 focused on adding visual fire notification in public washrooms. The provision of audible and visual fire notification (horns and strobes) as required by the current building code, will be a desirable improvement to the accessibility of the campus buildings.

#### 1.5. Elevating Devices User Interfaces

As part of CAAP phase 1 every elevator on campus was retrofitted with voice annunciators that announces the floor and direction of travel. Some of the older model elevators lack braille buttons, and these retrofits are being implemented as part of the elevator modernization through deferred maintenance. The vertical lifts on campus are in need of some upgrades. Some of them do not have card access and need a key to operate. Some do not have emergency communication lines inside cabs to call for assistance and they lack consistent operational signage and directions. The upgrades to the vertical lifts will be an important improvement to the accessibility on campus.

#### 1.6. Barrier free path of travel inside building

This is a new item in CAAP Phase 2. Users (students, faculty or staff) with accessible needs often have specific requests for making their path of travel barrier free, based on their location and nature of work on campus. Their office / classroom door, travel path to the barrier free washroom and the travel path to the accessible building entrance need to be barrier free. Making barrier free travel paths focused on individuals with special needs will improve the accessibility of the campus.

#### 1.7. Drinking Fountains

CAAP phase 1 ensured at least one accessible drinking water fountain for all buildings. Provision of an additional barrier free hydration station in buildings at a different level in each building will be very beneficial to the people with disabilities.

#### 1.8. Summary of Least Accessible Buildings

The least accessible buildings on campus are: E.T. Clarke Utility Centre (#12), Nuclear Reactor (#15), Biology Greenhouse (#30), Campus Services Building (#31) and Temporary Building T26. These buildings reduce the overall accessibility of the campus. They account for many of the exterior entrance accessibility issues, and none of these buildings have elevators to aid in transportation within the building. These buildings are, in many

cases, are among the least critical to the delivery of the Universities core mission. The accessibility improvements in these buildings will be deferred to a future phase of the CAAP.

## **.2 Off-Campus Buildings**

In view of the recent date of construction of most of the off-campus buildings, they will have a high degree of accessibility. The recently acquired residence buildings on Sterling Street, Forsyth Avenue and Whitton Road are exceptions and are not currently accessible. The building on 88 Forsyth Avenue is currently undergoing renovations and will be an accessible building after renovations.

## **.3 Housing and Conference Services Buildings**

The CAAP phase 1 included a ten (10) year plan for the Housing and Conference Services buildings, with a proposed spent of \$1 million over 10 years (till 2023) and is recommended to be continued. This will mean that the residence buildings will be funded at \$100,000 per year till 2023 for accessibility improvements. Refer to Appendix C for the summary of accessibility improvements proposed.

## **2. Recommended Priorities for CAAP phase 2**

The scale of accessibility issues and the cost of correction are such that interim standards are required. The suggested priorities for CAAP phase 2 are as follows:

- a. Provide barrier free entrance points by constructing ramps and providing barrier free path of travel at all frequently used building exterior entrances.
- b. Provide assisted access by installing automated door operators to all frequently used exterior doors.
- c. Provide an elevator in the Applied Dynamics Lab building.
- d. Provide an additional barrier-free washroom at an additional level in each building.
- e. Interior corridor doors used frequently by people with disabilities to be retrofitted with automated door operators and the path of travel would be made barrier free.
- f. Visual fire notification by providing strobes for individuals having difficulty hearing bells or sirens in all corridors.
- g. Retrofit the Lifts on campus with card access system, emergency communication phone line and consistent signage for its operation.

- h. Provide an additional barrier free drinking water fountain in every building at a different level.

### 3. Proposed Projects and Estimated Cost

Based on the recommended measures that are outlined earlier in this document, Appendix A include a list of all of the proposed projects and their respective cost estimate.

Appendix B include only the prioritized and recommended list of projects and measures to be undertaken in CAAP phase 2 – 2018-2023 i.e. for the next 5 years. This cost estimate totals \$3.025million.

Based on the approved 2018-2019 (first year) budget of \$334,000 for accessibility, the proposed CAAP program for 2018-2019 is included under Appendix D.

The outstanding accessibility items requiring installation, modernization or renovation in order to meet the recommended accessibility measures will be prioritized after the Budget Committee's approval of the annual funds.

### 4. Future New Buildings

Accessibility requirements for new construction will continue to be governed by the Ontario Building Code (OBC). Effective 01 Jan 2015, amendments to the Ontario Building Code enhanced existing provisions and introduced new requirements to make buildings more accessible. These amendments were the result of the Ministry of Municipal Affairs incorporating the AODA built environment standards into the OBC.

The changes considered as part of the proposed next edition of the Building Code would be minor technical amendments to clarify existing requirements. The changes for consideration include, but are not limited to:

- New requirements for cross-slopes and surface materials on barrier-free ramps
- New requirements for emergency lighting in universal washrooms
- Amendments and clarifications regarding the number of universal washrooms in large buildings, washroom stall privacy, grab bars, washroom accessories, controls, power door operators, and door clearances
- Clarifications regarding tactile walking surface indicators at stairs, ramps and edges of pools and platforms

McMaster will continue to construct and renovate in accordance to the current OBC, but will also apply accessibility initiatives in accordance with the recommendation contained within the CAAP. These initiatives will include all the items surveyed for in the CAAP, and contained within Section 3.

Though many of these initiatives are already contained within the OBC, it is the desire for new construction to be above the minimum standards to allow greater accessibility to the McMaster community.

Attachments:

**Appendix A:** Campus Audit all improvements

**Appendix B:** Recommended improvements in Academic and Administrative Buildings

**Appendix C:** Audit and Estimate for improvements in Housing and Conference Services Buildings

**Appendix D:** 2018-2019 Recommended improvements



**APPENDIX A - CAMPUS AUDIT AND ESTIMATE FOR IMPROVEMENTS  
CAAP 2018-2023**

Building Number	Name	Academic/ Residence/ other	Access to the exterior doors of the building (ramps)			Assisted access to the exterior doors using automatic door openers			Access to all floors within the building by adding elevator or lift		Access to barrier free washroom facilities		Access to barrier free drinking water		Visual alarm fire notification for individuals who have difficulty hearing bells or sirens		Barrier Free path of travel inside building		Total Cost Estimates per Building	Comments
			Exterior 100% accessible	Ramp to Building / Ground Level	Estimated Cost To Improve to Minimum	Auto Door Openers	If no, are there accessible entrances	Estimated Cost To Improve to Minimum	Interior 100% accessible	Estimated Cost To Improve to Minimum	# of Disabled washrooms	Estimated Cost To Improve to Minimum	Estimated Cost To Improve to Minimum	Estimated Cost To Improve to Minimum	Strobes in corridors and lounges	Estimated Cost To Improve to Minimum	Barrier free path of travel available	Estimated Cost To Improve to Minimum		
1	University Hall	Academic	No	ground level access at west side	n/a	Yes, at west entrance	Yes	n/a	Yes	0	3, no disabled w/rooms on 1st floor	75,000	Yes	5,000	No	10,000	No	30,000	120,000	The main door is not accessible. Back and side doors are not accessible. One wing is not accessible without use of an elevating lift that is present
2	Hamilton Hall	Academic	No	ground level access at south side	n/a	Yes	Yes	n/a	Yes	n/a	8, no auto door on 2nd, 3rd & 4th floor	75,000	(2) Yes	n/a	No	0	No	30,000	105,000	Lose grabber in women's basement washroom
4	Refectory	Academic	Yes	Yes	n/a	Yes	Yes	10,000	No		2, Yes	n/a	yes	5,000	Yes	n/a	No	0	15,000	
5	Edwards Hall	Residence	No	No	250,000	No	No	60,000	No	3,000,000	0	75,000	N/A	n/a	no	35,000	N/A	n/a	3,420,000	No elevator in building.
6	Wallingford Hall	Residence	No	Yes, ground level entry	n/a	No	Yes	10,000	No	3,000,000	0	75,000	N/A	n/a	Yes	n/a	N/A	n/a	3,085,000	No elevator in building.
7	Alumni House	Academic	Yes	Yes	n/a	Yes	Yes	0	No	1,500,000	1	0	No fountains	5,000	No		No	n/a	1,505,000	No elevator in building. No auto door openers
8	Alumni Memorial Hall	Academic	No	Yes	n/a	Yes	Yes	n/a	No	2,000,000	2, no button access	0	No fountains	n/a	Yes	n/a	No	30,000	2,030,000	
9	Nuclear Research	Academic	Yes	Yes, 2 ramps	n/a	exterior only	Yes	n/a	Yes	n/a	3, no auto door opener	n/a	1, yes	n/a	Yes	n/a	No	15,000	15,000	New edition to building has improved disabled access to whole building
10	Mills Library	Academic	Yes	Yes	n/a	Yes		n/a	No	3,000,000	1 Library access 4, 2 museum no button access	0	Yes	n/a	No Library, Yes Museum	0	No	30,000	3,030,000	1 washroom in art museum, no push bottom access
11	Burke Science	Academic	No	2, Yes. Additional @n-w side	20,000	Yes	Yes	10,000	Yes	n/a	5	n/a	Yes	5,000	Yes	n/a	Yes	45,000	80,000	
12	E.T. Clark Centre	Academic	No	No. Security Office	40,000	No	No	15,000	No	3,000,000	0	75,000	No fountains	5,000	No	35,000	No	n/a	3,170,000	No elevator in building. Ground floor is also not accessible
15	Nuclear Reactor	Academic	N/A	No	n/a	No	N/A	n/a	N/A	n/a	0	n/a	No	n/a	No	n/a	No	n/a	0	Access through NRB
16	John Hodgins Engineering	Academic	Yes	Yes. Additional on n-w side	20,000	yes	N/A	40,000	Yes if using freight elevator	n/a	9, no button access	95,000	Yes	n/a	No	35,000	No	60,000	250,000	Access to basement must be done using a freight elevator
17	Divinity College	Other	No	Yes, east side access north side	n/a	yes	N/A	n/a	No	3,000,000	2, no button access	0	No fountains	10,000	No	35,000	No	n/a	3,045,000	Interior door no push button access, No drinking fountains. No elevator in building
18	Moulton Hall	Residence	No	Yes	n/a	Yes	Yes	n/a	Yes	n/a	1	n/a	N/A	n/a	Yes	n/a	No	35,000	35,000	
19	Whidden Hall	Residence	Yes	Yes	n/a	No	Yes	10,000	Yes	n/a	0	75,000	N/A	n/a	No	35,000	No	35,000	155,000	
20	Gilmour Hall	Academic	No	Yes	n/a	No	Yes	n/a	Yes	n/a	0	75,000	No	5,000	No	20,000	No	45,000	145,000	New ramp at front is being funded through other means. GH has an elevator that services all floors
22	General Science	Academic	No	Yes. Additional on east side	60,000	Yes	Yes	10,000	Yes	n/a	1	100,000	Yes	n/a	Yes	n/a	No	0	170,000	old building, however elevator makes all floors disabled accessible

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23	Chester New Hall	Academic	No	Both ramp to 1st floor an ground level to basement yes	n/a	yes	Yes	n/a	Yes	n/a	2 in basement. No automatic door openers	75,000	yes	n/a	No	35,000	Yes	15,000	125,000	Recent upgrade to maintenance has significantly improved the disability access to building
24	Ivor Wynne Centre	Academic	Yes	Yes, south side entrance with button access	n/a	Yes	Yes	n/a	Yes	n/a	4 although not clearly identified	75,000	Yes	5,000	No	30,000	No	20,000	130,000	Building needs proper signage, ground level access to new addition of 24
25	A. N. Bourns	Academic	No	Yes	n/a	Yes	Yes	n/a	Yes	n/a	2 first floor	n/a	Yes	n/a	Yes	30,000	No	15,000	45,000	strobes are present in new part of ABB(Westside)
26	Matthews Hall	Residence	No	Yes	n/a	No	Yes	n/a	No	5,000,000	0	75,000	N/A	n/a	No	35,000	N/A	n/a	5,110,000	There is no elevator in this building. The only floor that is accessible is first floor
27	McKay Hall	Residence	Yes	Yes	n/a	No	Yes	n/a	Yes	n/a	2	n/a	N/A	n/a	Yes	n/a	No	55,000	55,000	
28	Commons Building	Academic	Yes	Ground level yes	n/a	Yes	Yes	10,000	Yes	n/a	2 in basement	75,000	Yes	5,000	No	0	No	15,000	105,000	The lift in the building that provides access to the upper and lower floors is old and not 'user friendly'. Installation of an elevator should be considered
29	Togo Salmon Hall	Academic	No	Yes	n/a	Yes	Yes	n/a	Yes	n/a	2 in basement	75,000	Yes	5,000	No	25,000	Yes	15,000	120,000	Better signage needed to guide disabled person to facilities offered in building
30	Greenhouse	Academic	No	Yes	n/a	No	Yes	10,000	No	300,000	0	n/a	No	n/a	No	n/a	No	n/a	310,000	navigation inside the greenhouse and access to the basement not possible
31	Campus Services Building	Academic	No	No	180,000	No	No	10,000	No	1,000,000	1 on 2nd floor	n/a	No	5,000	No	n/a	No	n/a	1,195,000	No elevator in building, Building poorly designed for disabled access
32	Tandam Accelerator	Academic	Yes	Yes	n/a	No	No	10,000	Yes	n/a	2 on first floor	n/a	No	5,000	Yes	30,000	No	10,000	55,000	No elevator in building
33	Applied Dynamics	Academic	No	Yes	n/a	Ground level is possible	yes	n/a	No	1,000,000	0	0	No	n/a	No	n/a	No	10,000	1,010,000	No elevator in building. Building not designed nor intended to be disabled accessible
34	Psychology	Academic	Yes	Ground level entry	n/a	yes	yes	20,000	Yes	n/a	1 on first floor	75,000	Yes	5,000	No	30,000	No	20,000	150,000	Building is currently under construction
35	Woodstock Hall	Residence	Yes	Yes	n/a	No	Yes	n/a	Yes	n/a	0	75,000	N/A	n/a	Yes	n/a	No	55,000	130,000	
36	Brandon Hall	Residence	Yes	Yes	n/a	No	Yes	n/a	Yes	n/a	0	n/a	N/A	n/a	Yes	n/a	No	10,000	10,000	
38	Kenneth Taylor Hall	Academic	No	Yes, from different buildings (i.e. 23, 29, 46, 51)	n/a	Yes	Yes	n/a	Yes	n/a	1 basement	75,000	Yes	5,000	No	30,000	No	15,000	125,000	Access to building may be achieved by taking ramp at 23, 29 or 46. Access also through basement as arts building are all connected
39	Life Sciences	Academic	No	Ramp entry to building on west side yes	n/a	Yes	Yes	20,000	Yes	n/a	2 on first floor	75,000	Yes	5,000	yes	n/a	No	n/a	100,000	Building provides for basic accessibility from west entrance- ramp
40	Bates Residence	Residence	Yes	Yes	n/a	No	Yes	n/a	Yes	n/a	1	n/a	N/A	n/a	Yes	n/a	No	10,000	10,000	
42	Thode Library	Academic	Yes	Ground level entry	n/a	Yes	Yes	n/a	Yes	n/a	2 basement push button	75,000	Yes	5,000	Yes	n/a	No	n/a	80,000	Library not very accessible basement only washrooms not well signed for push button access
43	Communications Research	Academic	Yes	Ground level entry	n/a	Yes	Yes	n/a	Yes	n/a	4	n/a	Yes	5,000	Yes	20,000	No	20,000	45,000	Recent improvements to building have made for greater access
44	MUMC parking complex	Other																	0	
45	Hedden Hall	Residence	Yes	Yes	n/a	No	Yes	n/a	Yes	n/a	4	n/a	N/A	n/a	No	35,000	No	10,000	45,000	
46	Degroote School of Business	Academic	Yes	wheel chair ramp at front entrance yes	n/a	Yes	Yes	n/a	Yes	n/a	11 all floors have	n/a	Yes	5,000	Yes	30,000	No	10,000	45,000	Newer building that has east side entrance ramp and all floors are disabled accessible with access to many washrooms
48	Institute of Applied Health Sciences	Academic	Yes	Ground level yes	n/a	Yes	Yes	20,000	Yes	n/a	6 all floors have	n/a	Yes	5,000	No	0	No	0	25,000	
49	Information Technology Building	Academic	No	Both ground access west side and ramp east side	n/a	Yes	Yes	n/a	Yes	n/a	4	n/a	Yes	5,000	Yes	20,000	No	10,000	35,000	Recent renovations have improved disabled access to all levels of building
50	Mary Keyes Residence	Residence	Yes	yes	n/a	Yes	Yes	n/a	Yes	n/a	12	n/a	N/A	n/a	Yes	n/a	No	10,000	10,000	

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CAAP 2018-2023**

51	Student Centre	Other	Yes	Ground level east side & south side yes	n/a	Yes	Yes	n/a	Yes	n/a	5	n/a	Yes	5,000	Yes	20,000	No	10,000	35,000	newer facility with interior ramps have enabled disabled access to all of building
52	Michael Degroote Centre for Learning	Academic	Yes	Ground level entry on both north side & south side	n/a	Yes	Yes	n/a	Yes	n/a	24	n/a	Yes	5,000	Yes	20,000	No	10,000	35,000	Basically all washrooms are accessible, however only some have e apush button access, although all have disability signage and large washroom stall
53	Les Prince Hall	Residence	Yes	Yes	n/a	Yes	Yes	n/a	Yes	n/a	4	n/a	N/A	n/a	Yes	n/a	No	10,000	10,000	
54	David Braley Athletic Centre	Other	Yes	Ground level entrance	n/a	Yes	Yes	n/a	Yes	n/a	5	n/a	Yes	n/a	Yes	20,000	No	10,000	30,000	building very accessible with ramps designed to access all areas
55	Ron Joyce Stadium	Other	No	Ground level outside	n/a	No	Yes	n/a	No, football stadium	n/a	3/ 1 designed for disabled	n/a	No	5,000	No	20,000	No	10,000	35,000	Unique building. Due to the nature of it, there is not 100% accessibility, but the building is a recent design, and there is space and routes designated for individuals requiring special access. Elevator locked - difficult to access form ground level of stadium
56	Engineering Technology Building	Academic	Yes	Ground level entry	n/a	Yes	Yes	n/a	Yes	n/a	13 all floors have	n/a	Yes	n/a	Yes	20,000	Yes	10,000	30,000	Modern-new building that is well designed for disabled accessibility well signed
74	L.R. Wilson Hall	Academic	Yes	Yes	n/a	Yes	Yes	n/a					Yes	n/a	Yes	n/a	Yes	n/a		Modern -new building that is well designed for disables accessibility
T13	Temporary Building 13	Academic	No	Ground level entry	n/a	Yes	Yes	n/a	Yes	n/a	2	n/a	No	n/a	No	5,000	N/A	n/a	5,000	No elevator in building
TB26	Temporary Building 26	Academic	No	A wood wheel chair west side of building	n/a	No	No	10,000	Yes	n/a	1	n/a	No	n/a	No	n/a	N/A	n/a	10,000	A small cooking facility for Hospitality Services. Not at all accessible. Wheel chair ramp on west side however, can't access building , only from inside. Washroom, no push button-Access-not designed as disabled washroom. No elevator or drinking fountains in building.
<b>Total Cost Estimates per Category</b>					<b>570,000</b>			<b>275,000</b>		<b>25,800,000</b>		<b>1,470,000</b>		<b>120,000</b>		<b>660,000</b>		<b>740,000</b>		<b>\$ 29,635,000.00</b>

APPENDIX B - RECOMMENDED IMPROVEMENTS IN ACADEMIC AND ADMINISTRATIVE BUILDINGS  
2018 - 2023

Building Number	Name	Academic/ Residence/ other	Access to the exterior doors of the building (ramps)			Assisted access to the exterior doors using automatic door openers			Access to all floors within the building by adding elevator or lift		Access to barrier free washroom facilities		Access to barrier free drinking water		Visual alarm fire notification for individuals who have difficulty hearing bells or sirens		Barrier Free path of travel inside building		Total Cost Estimates per Building	Comments
			Exterior 100% accessible	Ramp to Building / Ground Level	Estimated Cost To Improve to Minimum	Auto Door Openers	If no, are there accessible entrances	Estimated Cost To Improve to Minimum	Interior 100% accessible	Estimated Cost To Improve to Minimum	# of Disabled washrooms	Estimated Cost To Improve to Minimum	Lowered water fountains	Estimated Cost To Improve to Minimum	Strobes in corridors and lounges	Estimated Cost To Improve to Minimum	Barrier free path of travel available	Estimated Cost To Improve to Minimum		
1	University Hall	Academic	No	ground level access at west side	n/a	Yes, at west entrance	Yes	n/a	Yes		3, no disabled w/rooms on 1st floor	\$75,000.00	Yes	\$5,000.00	No	\$10,000.00	No	\$30,000.00	\$120,000.00	
2	Hamilton Hall	Academic	No	ground level access at south side	n/a	Yes	Yes	n/a	Yes		8, no auto door on 2nd, 3rd & 4th floor	\$75,000.00	(2) Yes	n/a	Yes	\$0.00	No	\$30,000.00	\$105,000.00	
4	Refectory	Academic	No	Yes	n/a	Yes	Yes	\$10,000.00	No		2, Yes	n/a	yes	\$5,000.00	No	\$0.00	No	\$0.00	\$15,000.00	
7	Alumni House	Academic	Yes	Yes	n/a	Yes	Yes	\$0.00	No		1, yes	\$0.00	NO fountains, must provide	\$5,000.00	Yes	\$0.00	No	n/a	\$5,000.00	
8	Alumni Memorial Hall	Academic	No	Yes	n/a	Yes	Yes	n/a	No		2, no button access	\$0.00	No fountains	\$5,000.00	Yes	\$0.00	No	\$30,000.00	\$35,000.00	
9	Nuclear Research	Academic	Yes	Yes, 2 ramps	n/a	exterior only	Yes	n/a	Yes		3, no auto door opener	n/a	1, yes	\$5,000.00	Yes	\$0.00	No	\$15,000.00	\$20,000.00	
10	Mills Library	Academic	Yes	Yes	n/a	Yes		n/a	No		1 Library access 4, 2 museum no button access	\$0.00	Yes	\$5,000.00	yes	\$0.00	No	\$30,000.00	\$35,000.00	
11	Burke Science	Academic	No	2, Yes. Additional @n-w side	\$20,000.00	Yes	Yes	\$10,000.00	Yes		5	n/a	Yes	\$5,000.00	Yes	\$0.00	Yes	\$45,000.00	\$80,000.00	
12	E.T. Clark Centre	Academic	No	No. Security Office	\$40,000.00	No	No	\$15,000.00	No		0	\$75,000.00	No fountains	\$5,000.00	yes	\$35,000.00	No	n/a	\$170,000.00	
15	Nuclear Reactor	Academic	N/A	No	n/a	No	N/A	n/a	N/A		0	n/a	No	n/a	yes	\$0.00	No	n/a	\$0.00	
16	John Hodgins Engineering	Academic	Yes	Yes. Additional on n-w side	\$20,000.00	yes	Yes	\$40,000.00	Yes if using freight elevator		9, no button access	\$95,000.00	Yes	n/a	no	\$35,000.00	No	\$60,000.00	\$250,000.00	
20	Gilmour Hall	Academic	No	Yes	n/a	No	Yes	n/a	Yes		0	\$75,000.00	Yes	\$5,000.00	no	\$20,000.00	No	\$45,000.00	\$145,000.00	
22	General Science	Academic	No	Yes. Additional on east side	\$60,000.00	Yes	Yes	\$10,000.00	Yes		1	\$100,000.00	Yes	n/a	no	\$0.00	yes		\$170,000.00	
23	Chester New Hall	Academic	No	Both ramp to 1st floor an ground level to basement yes	n/a	yes	Yes	n/a	Yes		2 in basement. No automatic door openers	\$75,000.00	yes	n/a	yes	\$35,000.00	Yes	\$15,000.00	\$125,000.00	
24	Ivor Wynne Centre	Academic	Yes	Yes, south side entrance with button access	n/a	Yes	Yes	n/a	Yes		4 although not clearly identified	\$75,000.00	Yes	\$5,000.00	no	\$30,000.00	No	\$20,000.00	\$130,000.00	
25	A. N. Bourns	Academic	No	Yes	n/a	Yes	Yes	n/a	Yes		2 first floor	n/a	Yes	n/a	no	\$30,000.00	No	\$15,000.00	\$45,000.00	
28	Commons Building	Academic	Yes	Ground level yes	n/a	Yes	Yes	\$10,000.00	Yes		2 in basement	\$75,000.00	Yes	\$5,000.00	yes	\$0.00	No	\$15,000.00	\$105,000.00	
29	Togo Salmon Hall	Academic	No	Yes	n/a	Yes	Yes	n/a	Yes		2 in basement	\$75,000.00	Yes	\$5,000.00	no	\$25,000.00	Yes	\$15,000.00	\$120,000.00	
30	Greenhouse	Academic	No	Yes	n/a	No	Yes	\$10,000.00	No		0	n/a	No	n/a	No	n/a	No	\$15,000.00	\$25,000.00	
31	Campus Services Building	Academic	No	No		No	No	\$10,000.00	No		1 on 2nd floor	n/a	No	\$5,000.00	No	n/a	No	n/a	\$15,000.00	

**APPENDIX B - RECOMMENDED IMPROVEMENTS IN ACADEMIC AND ADMINISTRATIVE BUILDINGS  
2018 - 2023**

32	Tandam Accelerator	Academic	Yes	Yes	n/a	No	No	\$10,000.00	Yes		2 on first floor	n/a	No	\$5,000.00	no	\$30,000.00	No	\$10,000.00	\$55,000.00	
33	Applied Dynamics	Academic	No	Yes	n/a	Ground level is possible	yes	n/a	No	\$500,000.00	0	\$0.00	No	n/a	No	n/a	No	\$10,000.00	\$510,000.00	Elevator cost is shared with the Faculty of Engineering
34	Psychology	Academic	Yes	Ground level entry	n/a	yes	yes	\$20,000.00	Yes		1 on first Floor	\$75,000.00	Yes	\$5,000.00	No	\$30,000.00	No	\$20,000.00	\$150,000.00	
38	Kenneth Taylor Hall	Academic	No	Yes, from different buildings (i.e. 23, 29, 46, 51)	n/a	Yes	Yes	n/a	Yes		1 basement	\$75,000.00	Yes	\$5,000.00	No	\$30,000.00	No	\$15,000.00	\$125,000.00	
39	Life Sciences	Academic	No	Ramp entry to building on west side yes	n/a	Yes	Yes	\$20,000.00	Yes		2 on first floor	\$75,000.00	Yes	\$5,000.00	yes	\$0.00	No	n/a	\$100,000.00	
42	Thode Library	Academic	Yes	Ground level entry	n/a	Yes	Yes	n/a	Yes		2 basement push button	\$75,000.00	Yes	\$5,000.00	Yes	\$0.00	No	n/a	\$80,000.00	
43	Communications Research	Academic	Yes	Ground level entry	n/a	Yes	Yes	n/a	Yes		4	n/a	Yes	\$5,000.00	yes	\$20,000.00	No	\$20,000.00	\$45,000.00	
46	Degroote School of Business	Academic	Yes	wheel chair ramp at front entrance yes	n/a	Yes	Yes	n/a	Yes		11 all floors have	n/a	Yes	\$5,000.00	no	\$30,000.00	No	\$10,000.00	\$45,000.00	
48	Institute of Applied Health Sciences	Academic	Yes	Ground level yes	n/a	Yes	Yes	\$20,000.00	Yes		6 all floors have	n/a	Yes	\$5,000.00	yes	\$0.00	No		\$25,000.00	
49	Information Technology Building	Academic	No	Both ground access west side and ramp east side	n/a	Yes	Yes	n/a	Yes		4	n/a	Yes	\$5,000.00	no	\$20,000.00	No	\$10,000.00	\$35,000.00	
52	Michael Degroote Centre for Learning	Academic	Yes	Ground level entry on both north side & south side	n/a	Yes	Yes	n/a	Yes		24	n/a	Yes	\$5,000.00	no	\$20,000.00	No	\$10,000.00	\$35,000.00	
54	David Braley Athletic Centre	Other	Yes	Ground level entrance	n/a	Yes	Yes	n/a	Yes		5	n/a	Yes	\$5,000.00	no	\$20,000.00	No	\$10,000.00	\$35,000.00	
55	Ron Joyce Stadium	Other	No	Ground level outside	n/a	No	Yes	n/a	No, football stadium		3/ 1 designed for disabled	n/a	No	\$5,000.00	No	\$20,000.00	No	\$10,000.00	\$35,000.00	
56	Engineering Technology Building	Academic	Yes	Ground level entry	n/a	Yes	Yes	n/a	Yes		13 all floors have	n/a	Yes	n/a	no	\$20,000.00	Yes	\$10,000.00	\$30,000.00	
T13	Temporary Building 13	Academic	No	Ground level entry	n/a	Yes	Yes	n/a	Yes		2	n/a	No		No	\$5,000.00	N/A	n/a	\$5,000.00	
TB26	Temporary Building 26	Academic	No	A wood wheel chair west side of building	n/a	No	No	n/a	Yes		1	n/a	No	n/a	No	\$0.00	N/A	n/a	\$0.00	

**Total Cost Estimates per Category**

**\$140,000.00**

**\$185,000.00**

**\$500,000.00**

**\$1,095,000.00**

**\$125,000.00**

**\$465,000.00**

**\$515,000.00**

Total Cost

\$3,025,000.00

APPENDIX C - AUDIT AND ESTIMATE FOR IMPROVEMENTS IN HOUSING AND CONFERENCE SERVICES BUILDINGS

Building Number	Name	Academic/Residential	Access to the exterior doors of the building (ramps)			Assisted access to the exterior doors using automatic door openers			Access to all floors within the building by adding elevator or lift		Access to barrier free washroom facilities		Access to barrier free drinking water		Visual alarm fire notification for individuals who have difficulty hearing bells or sirens		Barrier Free path of travel inside building		Total Cost Estimates per Building	Comments	
			Exterior 100% accessible	Ramp to Building / Ground Level	Estimated Cost To Improve to Minimum	Auto Door Openers	If no, are there accessible entrances	Estimated Cost To Improve to Minimum	Interior 100% accessible	Estimated Cost To Improve to Minimum	# of Disabled washrooms	Estimated Cost To Improve to Minimum	Lowered water fountains	Estimated Cost To Improve to Minimum	Strobes in corridors and lounges	Estimated Cost To Improve to Minimum	Barrier free path of travel available	Estimated Cost To Improve to Minimum			
5	Edwards Hall	sider	No	No		No	No		No		0		N/A	n/a	Yes	\$0.00	N/A	n/a	\$0.00		
6	Wallingford Hall	sider	No	Yes, ground level entry	n/a	No	Yes		No		0		N/A	n/a	Yes	\$0.00	N/A	n/a	\$0.00		
18	Moulton Hall	sider	No	Yes	n/a	Yes	Yes	n/a	Yes		1	n/a	N/A	n/a	No	\$10,000.00	No	\$35,000.00	\$45,000.00		
19	Whidden Hall	sider	Yes	Yes	n/a	No	Yes		Yes		0	\$75,000.00	N/A	n/a	No	\$0.00	No	\$35,000.00	\$110,000.00		
26	Matthews Hall	sider	No	Yes	n/a	No	Yes	n/a	No		0		N/A	n/a	yes	\$0.00	N/A	n/a	\$0.00		
27	McKay Hall	sider	Yes	Yes	n/a	No	Yes	n/a	Yes		2		N/A	n/a	no	\$30,000.00	No	\$55,000.00	\$85,000.00		
35	Woodstock Hall	sider	Yes	Yes	n/a	No	Yes	n/a	Yes		0	\$75,000.00	N/A	n/a	no	\$30,000.00	No	\$55,000.00	\$160,000.00		
36	Brandon Hall	sider	Yes	Yes	n/a	No	Yes	n/a	Yes		0	\$0.00	N/A	n/a	no	\$30,000.00	No	\$10,000.00	\$40,000.00	Funds for B.F. washroom already committed	
40	Bates Residence	sider	Yes	Yes	n/a	No	Yes	n/a	Yes		1	n/a	N/A	n/a	no	\$0.00	No	\$10,000.00	\$10,000.00		
45	Hedden Hall	sider	Yes	Yes	n/a	No	Yes	n/a	Yes		4	n/a	N/A	n/a	No	\$35,000.00	No	\$10,000.00	\$45,000.00		
50	Mary Keyes Residence	sider	Yes	yes	n/a	Yes	Yes	n/a	Yes		12	n/a	N/A	n/a	no	\$30,000.00	No	\$10,000.00	\$40,000.00		
53	Les Prince Hall	sider	Yes	Yes	n/a	Yes	Yes	n/a	Yes		4	n/a	N/A	n/a	yes	\$0.00	No	\$10,000.00	\$10,000.00		
<b>Total Cost Estimates per Category</b>					<b>\$0.00</b>			<b>\$0.00</b>			<b>\$150,000.00</b>		<b>\$0.00</b>		<b>\$165,000.00</b>		<b>\$230,000.00</b>				
																			Total Cost	\$545,000.00	

APPENDIX D – PROPOSED CAAP PROGRAM FOR 2018-2019

#	Description	Estimated Budget
1	Ramp at exterior doors of the building – BSB, JHE	
2	Assisted access to the frequently used exterior doors – BSB, JHE, E.T.Clark (Security Office)	
3	Additional barrier free washroom – University Hall, GSB	
4	Assisted access to all frequently accessed interior doors – JHE	
5	Fire alarm visual notification in corridors – GSB, TSH	
6	Additional barrier free drinking water fountain – CNH and TSH	
	Total cost estimate for 2018-2019	\$334,000

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