Report to the Business Board Deferred Maintenance December 2008



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Introduction - Facilities Condition Assessment Program

All Ontario Universities are actively engaged in the Facilities Condition Assessment Program using a common software and assessment methodology, the Vanderweill Facilities Assessment (VFA) program. The program provides a consistent way to determine, quantify, and prioritize deferred maintenance liabilities. At this point all academic and administrative buildings across the province have been assessed. Through the use of this software, each building has been assigned a numeric score reflecting the building's condition, called a facility condition index or FCI. This index is determined by dividing the cost of deferred maintenance by the current replacement cost of the building. Consequently, the lower the index the better the condition of the building or portfolio. On an annual basis, the Council of Ontario Universities provides a report on deferred maintenance across the sector to the Ministry of Training, Colleges and Universities. The next phase of this program, which has been delayed a year, is the assessment of the utilities infrastructure at each campus. The infrastructure assessment will be undertaken across the Province in 2009. The University of Toronto is well positioned for the infrastructure assessment as we completed the majority of this investigation as part of our Central Utilities Renewal Strategy, produced in 2006.

Academic and Administrative Buildings - University of Toronto

The current combined estimated replacement value of all academic and administrative buildings at the University of Toronto is \$3.1B. The total deferred maintenance liability is currently estimated at \$257M, down by \$19M from the previous year. This positive outcome is the result of significant funding, from both internal and external sources, utilized to directly address deferred maintenance and the indirect benefit of several renovation and renewal projects completed in 2008 that addressed deferred maintenance within the scope of the larger projects. Our combined facility condition index (FCI) is now 8.5%, which is down from 9.5% the previous year. Our institutional FCI is now markedly below 10%, the threshold for buildings in "poor" condition and below the average for all Ontario universities, although the St. George campus buildings are still at the threshold of buildings in "poor" condition.



It is important to note that the total deferred maintenance figures in this report are conservative for a number of reasons:

- 1. The VFA audits include a review of the existing building systems and <u>not</u> the systems that should be in the building. Capital renewal items, which address requirements to meet current fire codes, accessibility standards, or the cost to modernize the buildings to present day heating, ventilation or air conditioning standards are not included. These upgrades are defined by the COU as "adaptive renewal" and are excluded from the database.
- 2. The current VFA analysis does not include all construction related costs and cannot be used in isolation for budgeting purposes. For example, soft costs such as consulting fees and permit costs, which can add 15% to 30% to the overall cost of a project are not included in the database figures. Secondary effects needed to complete some of the repairs, such as asbestos removal, are also not included in the database figures.
- 3. The VFA database relates only to academic and administrative buildings. Deferred maintenance items related to other buildings or the central utilities infrastructure are not included.

The three University of Toronto campuses vary greatly in relation to the magnitude of the deferred maintenance liability. The graph below illustrates the number of buildings in the broad categories of "poor", "average", and "excellent" condition for each campus. It should be noted, however, although a building is classified in excellent condition in the context of deferred maintenance, it may have serious liabilities from a comfort or safety perspective. As noted above adaptive renewal items which bring a building into modern condition, such as adding air conditioning or accessibility components, are not identified in the deferred maintenance database.



The Facilities Assessment Program not only identifies deficiencies but also classifies all deferred maintenance items into priorities ranging from 1 to 5. Priority 1 items should be corrected within the next year. Priority 2 items should be addressed in the next 1 to 3 years. The graph below identifies all UofT priority 1 items and indicates that the vast majority of critical repair items have been identified at the St. George campus.



St. George Campus

There are over 100 academic and administrative buildings at the St. George campus, with a total gross area of 895,891 square meters and a total replacement value estimated at \$2.42B. The combined FCI is down from 10.8 in 2007 to 10.0 in 2008. The total estimated deferred maintenance backlog is now \$241M, down from the \$255M noted in the previous report. As noted previously, the change in overall deferred maintenance liability is attributable to direct funding addressing deficiencies and significant indirect funding from both the Energy Reduction Initiative and capital projects renewal work. The Energy Reduction project involved the replacement of 18 very old chillers. Examples of capital projects that indirectly addressed deferred maintenance included major renovations to the Economics building and 255 and 256 McCaul St.

The campus deficiencies by priority type are illustrated in the graph below. In contrast to the other UofT campuses, the vast majority of deferred maintenance items at St. George are still within the higher priority ratings of 1-3.



University of Toronto at Scarborough (UTSC)

There are 9 administrative and academic buildings at the UTSC campus with a total gross area of 89,382 square meters. The total replacement value of these buildings is estimated at \$286M. The total deferred maintenance liability stands at \$8.7M, down from the previous figure of \$12.3M. This change is the result of the demolition of several buildings which were removed from the database, and work completed to address deferred maintenance at the campus. With the addition of the new Science Research Building, the total FCI is now down to 3.0%. A facility condition index of 5.0% or less is indicative of buildings in excellent condition.

As can been seen in the chart below, the majority of the deferred maintenance items at the Scarborough campus are priority 2 to 4.



University of Toronto at Mississauga (UTM)

The survey data for UTM includes 11 buildings with a gross area of 96,821 square meters, unchanged from the previous report. Total replacement value of the buildings was estimated at \$336M, with a deferred maintenance backlog of \$7.7M. The campus FCI is down to 2.3%, indicating buildings in excellent condition. The reduction is the result of a number of renovation projects at this location.

Similar to the Scarborough campus, the majority of deferred maintenance items at the Mississauga campus are priority 2 to 4.



Managing Deferred Maintenance – Funding

Beyond the standard Provincial FRP funding of \$5M, the University of Toronto received two very large infusions of capital dollars for the Province during fiscal 2008. A total of \$63M was received in early 2008 for capital renewal. Some of this funding was directed specifically at deferred maintenance within academic and administrative buildings. Deferred maintenance repairs for St. George campus was also supported through \$9.3M of internal funding in 2008.

Beyond direct funding, deferred maintenance has been addressed indirectly through the Energy Renewal Initiative. Eighteen very old chillers were replaced as part of this project, which eliminated these machines from our deferred maintenance inventory. Capital renewal projects also addressed some of the deferred maintenance issues in the Economics building and the renovations to 255 and 256 McCaul.

The increased funding received in 2008 has resulted in a significant improvement in the University overall deferred maintenance liability. Going forward, in order to keep the FCI at its current level of 8.5%, we will require consistent funding of approximately \$13.5M per year.

Deferred Maintenance – Setting Priorities

The way in which we set priorities for deferred maintenance remains as it has been in previous years. We set our priorities based on four basic criteria:

- 1. Legislation, regulations, or enforcement agency orders requiring the work to be undertaken
- 2. Risk of failure based on VFA assessment priorities
- 3. Work that can be coordinated with major renovations to buildings
- 4. Projects that support academic priorities

Conclusion

Due to increased direct funding from internal and external sources, coupled with the indirect benefit of building renewal projects, we have seen positive gains in the overall deferred maintenance liability over the past few years. While we are presently managing the issue of deferred maintenance, this liability will be with us for a very long time into the future. With stable, significant funding we will be able to maintain the current condition of the buildings and minimize, although not eliminate, the chance of an unforeseen problem having major consequences to the University's mission and operating budget. In future years we plan to add the central utilities deferred maintenance requirements, as outlined above, to this report.

Schedule A: University of Toronto Facility Condition Index - December 2008

St. George Campus

BUILDING NAME	BUILDING USE	GSM	REPLACEMENT VALUE	DEFERRED MAINTENANCE COST	FCI	AUDIT DATE
142 - Spadina Ave-713	Administration	311	605,302	311,231	51.4%	2003-2004
046 - Varsity Newspaper	Administration	724	1,411,612	719,017	50.9%	2005-2006
097 - Centre for Medieval Studies	Academic	799	1,425,536	708,583	49.7%	2005-2006
071 - College Street-92	Administration	592	1,156,857	485,504	42.0%	2003-2004
050 - Falconer Hall	Administration	2,453	4,768,583	1,781,319	37.4%	2003-2004
061A - Borden Building North	Administration	3,425	6,117,256	2,231,649	36.5%	2003-2004
138 - Huron Street-370	Academic	443	790,848	280,941	35.5%	2003-2004
039 - St. George Street-49	Academic	787	1,407,550	488,260	34.7%	2002-2003
097A - Queens Park Cres. E 39 (Rear)	Administration	165	321,446	103,601	32.2%	2005-2006
054 - Spadina Crescent-1	Administration	8,647	16,834,585	5,316,880	31.6%	2002-2003
003 - Sigmund Samuel Library Building	Library	17,818	29,000,755	9,094,651	31.4%	2001
136 - Spadina Avenue-705	Administration	325	632,320	193,430	30.6%	2003-2004
433 - 43 Queen's Park	Administration	881	1,097,409	332,984	30.3%	2006-2007
068 - Clara Benson Building	Athletic Facility	9,988	15,306,410	4,567,822	29.8%	2001
061 - Borden Building South	Administration	2,443	4,351,374	1,285,900	29.6%	2003-2004
117 - W.B. MacMurray Field House	Athletic Facility	368	1,037,712	298,822	28.8%	2005-2006
053 - Institute of Child Study	Academic	2,489	4,425,417	1,269,984	28.7%	2003-2004
125 - Spadina Avenue-703	Administration	705	1,368,553	391,660	28.6%	2005-2006
110 - St. George Street-121	Administration	1,244	2,426,621	692,639	28.5%	2003-2004
033 - Sidney Smith Hall	Academic / Admin	28,039	54,199,387	14,033,890	25.9%	2001
091 - Studio Theatre	Academic	442	1,445,481	372,809	25.8%	2003-2004
154 - Board of Education	Academic / Admin	14,340	28,036,708	7,214,169	25.7%	2003-2004
146 - Sussex Avenue-40	Administration	375	732,866	181,745	24.8%	2003-2004
032 - Wetmore Hall - New College	Residence	12,919	16,051,728	3,947,618	24.6%	2005-2006
027 - Physical Geography Building	Academic	1,952	3,490,313	853,825	24.5%	2003-2004
084 - CIUT Radio	Other	686	1,939,199	467,057	24.1%	2002-2003
088 - St. George Street-123	Administration	790	1,543,684	370,922	24.0%	2003-2004
115 - St. George Street-97	Administration	1,039	2,031,006	478,741	23.6%	2003-2004
020 - Rosebrugh Building	Academic	5,628	10,089,090	2,332,868	23.1%	2002-2003
049 - Aerospace	Acad & Research	8,104	31,530,881	7,194,313	22.8%	2005-2006
082 - Gage Building	Academic	1,353	3,822,590	840,000	22.0%	2003-2004
030A - Varsity Arena	Athletic Facility	6,560	10,070,781	2,165,898	21.5%	2003-2004
120 - Louis B. Stewart Observatory (SAC)	Academic	537	965,832	206,333	21.4%	2005-2006
010A - Convocation Hall	Academic	4,348	14,286,137	3,025,356	21.2%	2002-2003
016 - Banting Institute	Acad & Research	9,466	36,592,054	7,585,530	20.7%	2002-2003
090 - College Street-88	Academic	1,734	3,098,675	627,493	20.3%	2003-2004
043 - School of Graduate Studies	Academic	1,139	2,030,427	408,584	20.1%	2003-2004
028 - Architecture Building	Academic	6,452	11,536,692	2,221,221	19.3%	2005-2006
007 - Mining Building	Acad & Research	11,064	19,865,301	3,815,624	19.2%	2002-2003
093 - Electrometallurgy Lab	Acad & Research	176	684,161	130,077	19.0%	2005-2006

St. George Campus cont.

BUILDING NAME	BUILDING USE	GSM	REPLACEMENT VALUE	DEFERRED MAINTENANCE COST	FCI	AUDIT DATE
023 - University College Union	Other	2,090	4,071,696	747,782	18.4%	2002-2003
067 - Huron Street-215	Administration	11,572	22,498,282	3,857,637	17.1%	2003-2004
019 - Kings College Circle-21	Administration	2,331	4,564,005	774,422	17.0%	2002-2003
089 - Admissions Office	Administration	1,802	3,515,270	592,260	16.8%	2003-2004
024 - Haultain Building	Administration	3,258	5,827,096	964,988	16.6%	2003-2004
034 - Massey College	Academic	7,456	21,039,564	3,456,945	16.4%	2005-2006
021 - Engineering Annex	Acad & Research	1,941	7,559,322	1,166,983	15.4%	2002-2003
056 - Graduate Students Union	Administration	920	1,801,038	256,829	14.3%	2003-2004
102 - Soldiers Tower	Other	300	851,766	118,046	13.9%	2005-2006
068A - Warren Stevens Building	Athletic Facility	19,568	29,876,031	4,059,463	13.6%	2001
077 - Sussex Court	Academic	3,293	5,890,420	798,716	13.6%	2005-2006
010 - Simcoe Hall	Administration	5,893	11,550,869	1,480,936	12.8%	2002-2003
052 - Best Institute	Acad & Research	6,884	26,871,143	3,348,503	12.5%	2002-2003
006 - John P. Robarts Library Building	Library	80,882	131,552,147	15,791,266	12.0%	2001
070 - Galbraith Building	Academic	19,577	34,806,536	4,176,921	12.0%	2001
153 - Spadina Road-56	Administration	899	1,764,422	210,352	11.9%	2003-2004
014 - Bloor Street West-371	Administration	16,568	32,316,878	3,842,791	11.9%	2003-2004
036 - Nursing Building	Academic	3,131	12,174,643	1,434,276	11.8%	2002-2003
001 - University College	Academic / Admin	16,922	47,678,920	5,372,667	11.3%	2001
051 - Edward Johnson Building	Academic	14,881	26,428,061	2,752,577	10.4%	2001
004 - McMurrich Building	Administration	5,400	10,578,276	1,090,156	10.3%	2002-2003
026 - Cumberland House	Administration	1,581	2,819,555	280,678	10.0%	2003-2004
005 - Medical Sciences Building	Acad & Research	72,372	278,559,828	27,402,745	9.8%	2001
022 - Mechanical Engineering Building	Acad & Research	9,723	37,713,086	3,677,697	9.8%	2001
072 - Ramsay Wright Zoological Laborator	Acad & Research	22,997	88,528,561	7,923,061	8.9%	2001
073 - Lash Miller Chemical Laboratories	Acad & Research	21,681	83,404,856	7,375,432	8.8%	2001
078 - McLennan Physical Laboratories	Acad & Research	31,826	122,459,446	10,740,040	8.8%	2001
006B - Thomas Fisher Rare Book Library B	Library	6,383	10,501,758	895,475	8.5%	2002-2003
032A - Wilson Hall - New College	Academic	18,360	22,888,494	1,904,886	8.3%	2002-2003
156 - Old Administration Building (BOE	Academic / Admin	3,093	5,820,323	483,087	8.3%	2003-2004
011 - Tanz Neuroscience Building	Acad & Research	5,421	21,049,851	1,632,311	7.8%	2003-2004
006A - Claude T. Bissell Building	Academic	9,298	16,678,102	1,262,992	7.6%	2002-2003
040 - Flavelle House	Academic	11,512	20,546,502	1,534,872	7.5%	2003-2004
079 - F. Norman Hughes Pharmacy Building	Acad & Research	6,196	24,156,903	1,744,303	7.2%	2002-2003
065 - Dentistry Building	Acad & Research	23,898	92,424,559	6,174,739	6.7%	2001
111 - Bloor Street West-246	Academic	6,698	11,960,887	781,010	6.5%	2005-2006
025 - FitzGerald Building	Acad & Research	9,392	36,563,713	2,278,656	6.2%	2001
123 - Ont. Inst. for Studies in Education	Academic	38,156	74,835,744	4,084,652	5.5%	2002-2003
008 - Wallberg Building	Acad & Research	17,160	66,342,104	3,581,816	5.4%	2001
057 - Bancroft Building	Administration	3,728	6,707,119	348,854	5.2%	2003-2004
062 - Earth Sciences Centre	Acad & Research	30,345	117,673,358	5,096,249	4.3%	2001
145 - Koffler Institute for Pharmacy Mgm	Academic	2,118	3,823,159	164,226	4.3%	2005-2006
008A - D.L. Pratt Building	Acad & Research	8,130	31,604,806	1,348,825	4.3%	2001

St. George Campus cont.

BUILDING NAME	BUILDING USE	GSM	REPLACEMENT VALUE	DEFERRED MAINTENANCE COST	FCI	AUDIT DATE
143 - Koffler Student Services Centre	Academic	11,511	32,473,452	1,370,692	4.2%	2003-2004
083 - McCaul Street-254/256	Academic	4,391	7,858,441	228,345	2.9%	2003-2004
009 - Sanford Fleming Building	Acad & Research	21,833	84,848,060	2,092,701	2.5%	2001
105 - Fields Inst for Research in Math	Academic	3,239	5,807,009	123,581	2.1%	2005-2006
132 - Innis College	Academic	3,361	6,040,154	122,394	2.0%	2003-2004
038 - Woodsworth College	Academic	5,332	15,160,262	299,926	2.0%	2005-2006
134 - Joseph L. Rotman School of Management	Academic	9,987	17,938,350	291,183	1.6%	2005-2006
103 - School of Continuing Studies	Academic	1,706	3,079,466	9,522	0.3%	2005-2006
080 - Bahen Information Technology Centre	Acad & Research	29,000	112,904,540	264,454	0.2%	2005-2006
047 - Canadiana Gallery	Library	2,864	4,706,096	-	0.0%	2003-2004
104 - Economics Department	Academic	2,403	4,293,080	-	0.0%	2003-2004
155 - 255/257 McCaul Street (BOE)	Academic / Admin	6,628	12,936,862	-	0.0%	2003-2004
160 - CCBR	Acad & Research	20,624	80,931,670	-	0.0%	n/a
161 - Leslie Dan Pharmacy Building	Acad & Research	15,626	61,318,499	-	0.0%	n/a
	St. George December 2008	895,891	2,419,104,180	240,842,865	10.0%	
	St. George Dec 2007		2,355,189,854	254,272,048	10.8%	
	St. George Nov 2006		2,299,429,210	267,243,858	11.6%	
	St. George Dec 2005		2,089,395,371	264,131,162	12.6%	
	St. George Jan 2005		1,980,206,646	247,488,670	12.5%	
	St. George Jan 2003		2,013,741,422	273,165,188	13.6%	

St. George Buildings Not Yet Audited (Data excluded from FCI calculation above)

BUILDING NAME	BUILDING USE	GSM	REPLACEMENT VALUE	DEFERRED MAINTENANCE COST	FCI	AUDIT DATE
98c - 90 Wellesley Mary Hall	Administration	2,317	4,132,138	n/a	n/a	n/a
98b - 90 Wellesley Fontbonne	Administration	4,152	7,404,677	n/a	n/a	n/a
128 - 172 St. George Jackman Humanities	Administration	1,823	3,250,600	n/a	n/a	n/a
xxx - 245 College St.	Administration	700	1,248,380	n/a	n/a	n/a
xxx - Medical Arts Building	Administration	9,859	17,582,541	n/a	n/a	n/a

UTM Campus

BUILDING NAME	BUILDING USE	GSM	REPLACEMENT VALUE	DEFERRED MAINTENANCE COST	FCI	AUDIT DATE
322 - Geomorphology Building	Acad & Research	60	234,593	70,161	29.9%	2005-2006
330 - Springbank Centre	Administration	543	1,060,756	220,731	20.8%	2005-2006
317 - Rock Magnetism Laboratory	Acad & Research	209	815,900	45,298	5.6%	2005-2006
311 - North Building	Acad & Research	9,459	36,860,777	1,694,737	4.6%	2005-2006

UTM Campus cont.

BUILDING NAME	BUILDING USE	GSM	REPLACEMENT VALUE	DEFERRED MAINTENANCE COST	FCI	AUDIT DATE
316 - Drama Workshop	Academic	418	1,376,436	53,335	3.9%	2005-2006
313 - South Building	Academic / Admin	52,478	203,540,646	5,573,145	2.7%	2005-2006
328 - Student Centre	Administration	2,991	8,470,751	34,353	0.4%	2005-2006
314 - Kaneff Ctr for Mgmt & Social Science	Acad & Research	3,376	13,165,556	36,441	0.3%	2005-2006
329 - CCIT	Academic	11,414	44,790,248	-	0.0%	2005-2006
331 - Academic Learning Centre	Library	9,173	15,187,553	-	0.0%	2005-2006
332 - Recreation, Athletics and Wellness Centre	Athletic Facility	6,700	10,428,014	-	0.0%	2005-2006
	UTM December 2008	96,821	335,931,231	7,728,201	2.3%	
	UTM Dec 2007		324,764,409	9,549,644	2.9%	
	UTM Nov 2006		288,384,319	9,165,351	3.2%	
	UTM Jan 2005		311,268,924	11,387,392	3.7%	
	UTM Jan 2003		251,473,702	21,436,566	8.5%	

UTSC Campus

BUILDING NAME	BUILDING USE	GSM	REPLACEMENT VALUE	DEFERRED MAINTENANCE COST	FCI	AUDIT DATE
200R - R-Wing	Athletic Facility	8,050	12,489,656	878,558	7.0%	2005-2006
200H - H-Wing	Academic / Admin	9,216	35,741,030	1,921,891	5.4%	2005-2006
200S - S-Wing	Academic / Admin	29,771	115,666,885	5,194,686	4.5%	2005-2006
200B - Bladen Wing	Academic / Admin	9,253	36,270,094	703,726	1.9%	2005-2006
200ARC - Academic Resource Centre	Library	8,737	14,424,088	7,141	0.0%	2005-2006
200M - Management Building	Academic / Admin	5,069	9,121,666	-	0.0%	2005-2006
200ART - Arts and Administration Building	Academic / Admin	8,737	17,201,755	2,834	0.0%	2005-2006
200SC - Student Centre	Multi-Use	4,913	9,680,182	-	0.0%	2005-2006
SRB - Science Research Building	Acad & Research	5,636	38,000,000	-	0.0%	n/a
	UTSC December 2008	89,382	288,595,356	8,708,836	3.0%	
	UTSC Dec 2007 UTSC Nov 2006		245,475,318 251.029.150	12,297,061 12,544,006	5.0% 5.0%	
	UTSC Jan 2005 UTSC Jan 2003		240,449,223 96,800,114	11,318,594 13,409,795	4.7% 13.9%	

- * Indicates new construction
- a Indicates new acquisition
- n/a Indicates building not yet audited