

Report on Deferred Maintenance

December 2005



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Introduction - Facilities Condition Assessment Program

In 1999, the Council of Ontario Universities (COU) and the Ontario Association of Physical Plant Administrators (OAPPA) adopted a five-year program to assess university facilities using consistent software, cost models and common audit methodology. All Ontario Universities agreed to participate in this initiative.

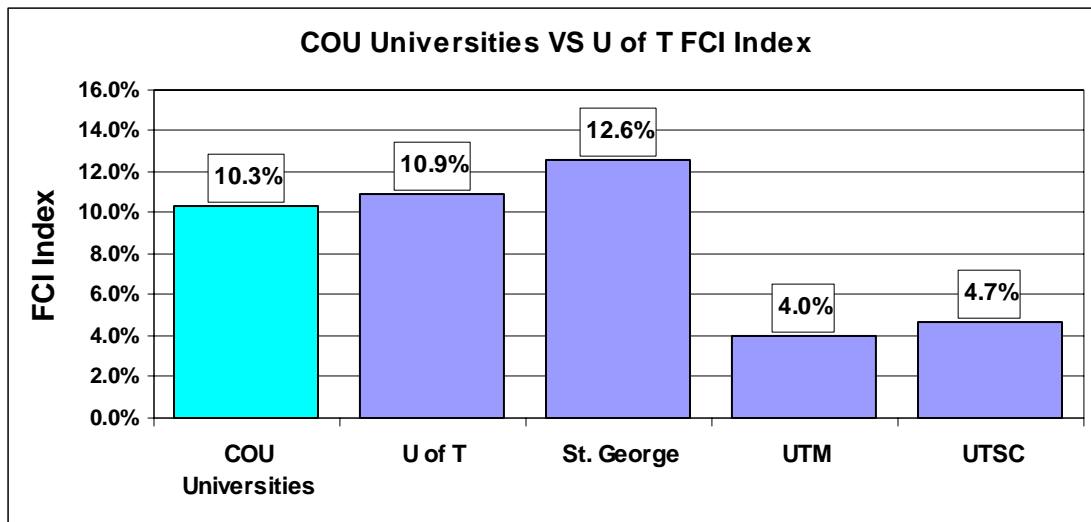
The common software and assessment methodology, Vanderweill Facilities Assessment (VFA) program, provides a consistent way to determine, quantify, and prioritize deferred maintenance liabilities. All facilities are assigned a numeric score called a facility condition index or FCI. The index for each building is determined by dividing the amount of deferred maintenance by the current replacement cost of the building. The FCI indices can be used for benchmarking with other institutions.

Each year, during the assessment program, Ontario Universities provide an updated report to the Ministry of Training, Colleges and Universities on their deferred maintenance inventory. At this time all Ontario university academic and administrative buildings have been audited.

Combined Campuses University of Toronto

In April of 2003, a report entitled Crumbling Foundations was presented to the Business Board for information. The report was specific to the state of deferred maintenance at the University of Toronto. At that time the estimated investment value of the buildings was \$2 billion with a deferred maintenance liability of \$273 million.

All University of Toronto academic and administrative buildings have now been audited. The combined estimated replacement value of all assessed buildings is \$2.6B with a total deferred maintenance liability estimated at \$286.3M. Unlike previous reports, the data here are based entirely on actual building audits and contain no theoretical values. Our combined facility condition index (FCI) is 10.9% which is slightly higher than the average for all Ontario universities at 10.3%. Buildings with an FCI over 10.0% are considered in poor condition.

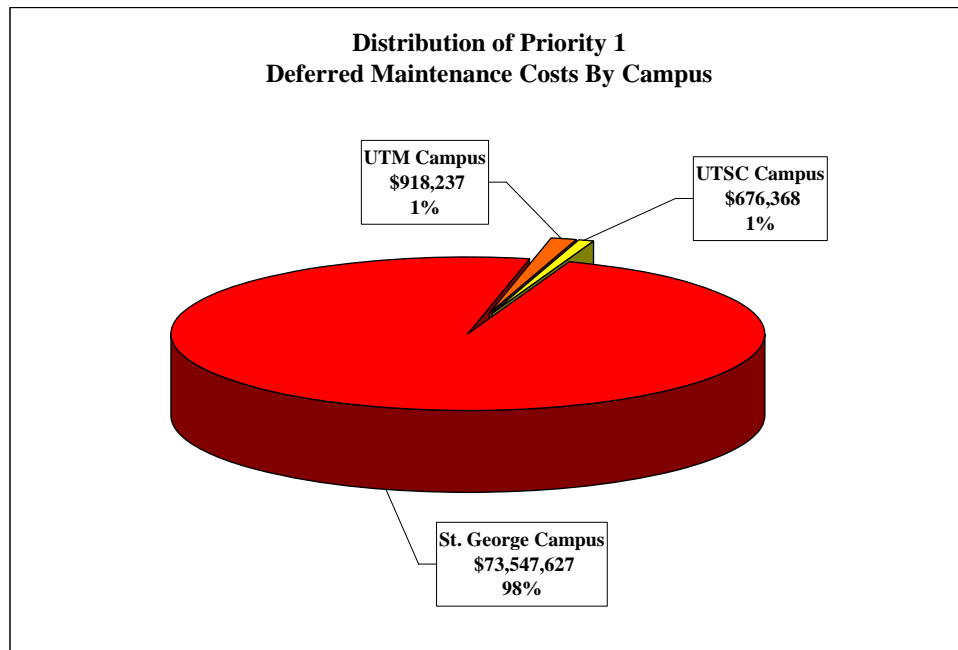


It is important to note that the total deferred maintenance figures noted in this report are conservative for a number of reasons:

1. The deficiencies do not include campus infrastructure deferred maintenance (central steam plant, central electrical system, central cooling system, and their respective distribution systems). A review of campus infrastructure is scheduled to be undertaken in 2006 through continuation of the VFA assessment program. The deferred maintenance backlog for these types of systems has been estimated at 20%-25% of the total building deficiencies according to the study *A Foundation to Uphold: a Study of Facilities Conditions at U.S. Colleges and Universities*.
2. The audits do not include all environmental liabilities such as mould and asbestos abatement. The University is obliged to undertake a significant amount of rehabilitation work on an annual basis in this area which is not part of our operating budget. The total liability is estimated in the tens of millions of dollars.
3. The current VFA analysis does not include construction soft costs. These costs, which include consulting fees and permits costs, can add 15% to 30% to the overall cost of a project.

All deferred maintenance items are classified 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. Priority 3 items should be corrected within 3 to 5 years and priority 4 and 5 items within the next 5 years.

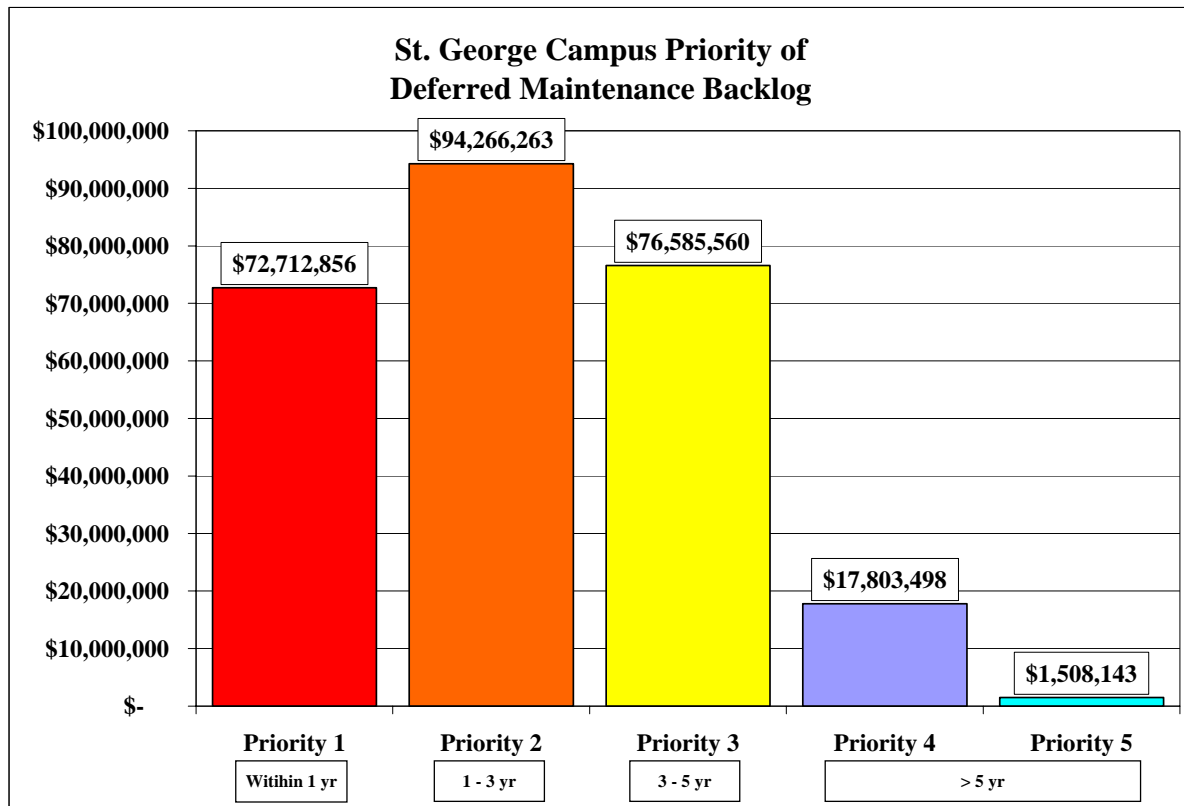
The graph below identifies the priority 1 items and indicates the vast majority of critical repair items have been identified at the St. George campus.



St. George Campus

The St. George campus academic and administrative buildings have a total gross area of 867,957 square metres and a total replacement value estimated at \$2.1B. The combined FCI is 12.6. The total estimated deferred maintenance backlog is \$264M, which we consider conservative, given that liabilities are not included in the VFA assessments.

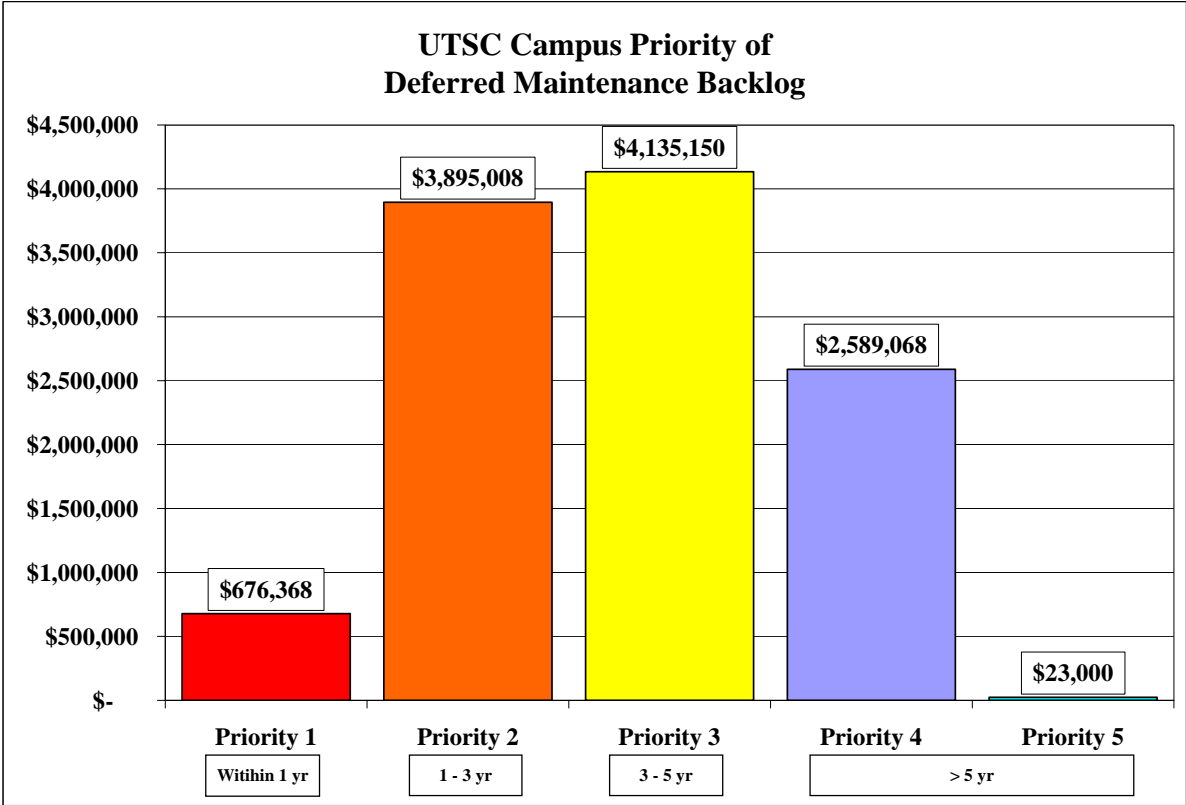
The vast majority of the deferred maintenance items at the St. George campus are priority 1 (within the next year) and priority 2 (within 1 – 3 years).



University of Toronto at Scarborough (UTSC)

There are 13 buildings in the database for the UTSC campus. The total gross area is 87,393 square metres. The total replacement value of these buildings is estimated at \$240.4 M. The total deferred maintenance liability stands at \$11.3M. This translates to an FCI of 4.7 which is considered excellent.

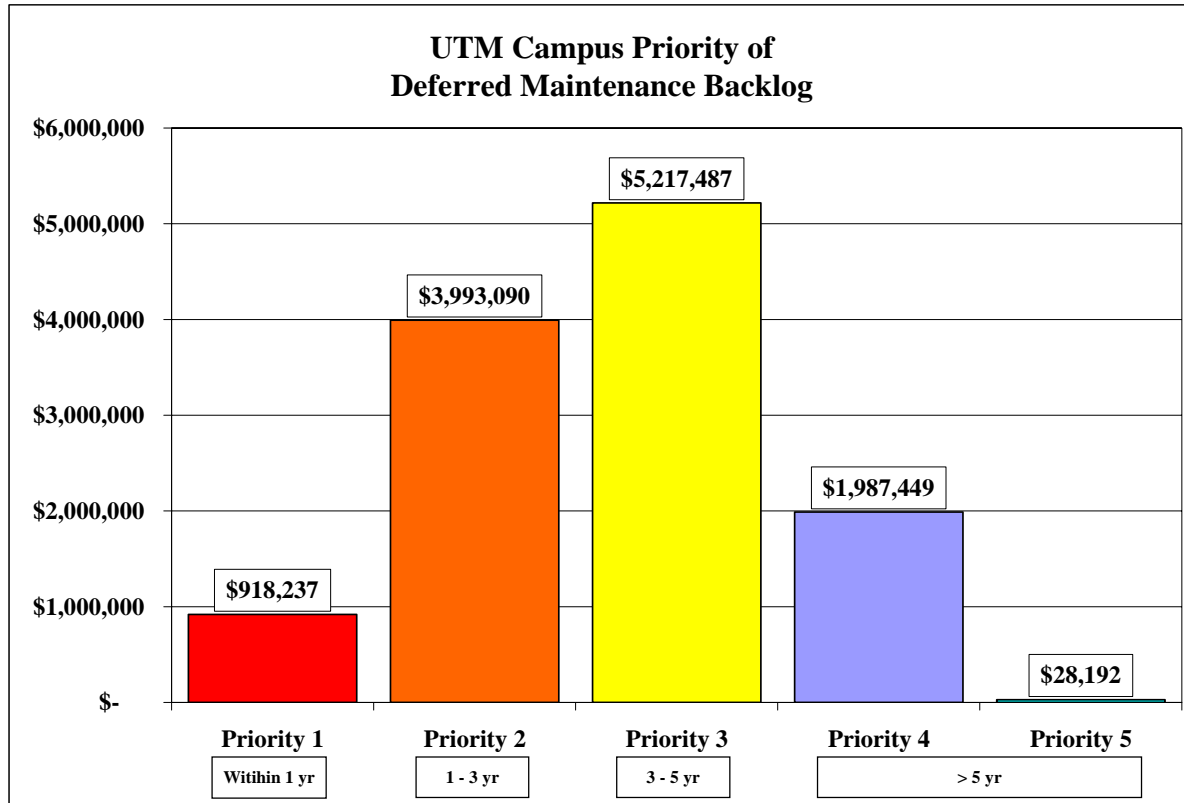
The majority of the deferred maintenance items at the Scarborough campus are priority 2 (within 1-3 years) and priority 3 (within 3-5 years).



University of Toronto at Mississauga (UTM)

The survey data include 12 buildings with a gross area of 84,303 square metres. Total replacement value of the buildings was estimated at \$306M, with deferred maintenance of \$12.1M. The campus FCI is 4.0 which is considered excellent.

The majority of the deferred maintenance items at the Mississauga campus are priority 2 (within 1-3 years) and priority 3 (within 3-5 years).



Solving the Problem of Deferred Maintenance – Funding

Traditionally the primary source of funding for deferred maintenance has been the Provincial Government's Facilities Renewal Program (FRP). Each year, \$42 million has been allocated to universities and colleges to assist with deferred maintenance. The allocation to each university is based on its share of space, although a minimum is set so that no one gets less than 0.5% of the total. U of T's share of this funding is \$4,896,546. St George receives \$4,164,800; UTSC receives \$348,674 and UTM receives \$383,072. Clearly this has been inadequate.

Early this calendar year, subsequent to the Rae Review, the Province provided a significant infusion of capital money to the post-secondary sector to cover the costs post-secondary institutions had invested into this issue during the past year. This funding was extremely well received, bringing \$26M to the University of Toronto. These funds were allocated to a large number of projects across all three campuses and the federated colleges. Examples of projects completed with these funds include: roof replacements, building envelop repairs, elevator retrofits, heating ventilation and air conditioning improvements, lecture hall renovations, and many other projects.

The building assessment program has been successful in identifying the magnitude and need for funding both externally and internally. According to members of OAPPA, most Ontario universities are now providing some level of direct funding to alleviate this problem. In fiscal 2006, the University of Toronto allocated \$8M to this issue. Internal funding from the University, combined with the significant one time additional FRP money from the Province, has insured that the deferred maintenance liability has not significantly increased.

In order to keep the FCI flat we will require consistent funding of approximately \$13M per year going forward. We are anticipating internal funding of approximately \$12M in the coming fiscal year. This funding combined with Provincial FRP funding will ensure our backlog of deferred maintenance does not increase. To start to improve the backlog, reducing the FCI 1% over a 5 year period, we would require consistent funding for all three campuses of \$18M per year. Again, this excludes the backlog of deficiencies within our campus infrastructure and the significant environmental liabilities noted earlier in this report.

Solving the Problem of Deferred Maintenance – Setting Priorities

Setting the priorities for deferred maintenance depends 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

The problems of deferred maintenance will be with us for a very long time into the future. We are comfortable, however, that this issue is now well recognized and that the appropriate attention and awareness has been achieved. With stable and significant funding we will be able to manage this issue and minimize, although not eliminate, the chance of a major problem having unforeseen consequences on the University's mission and operating budget.

Appendix A: All Buildings Facility Condition Index (FCI)

St. George Campus					
BUILDING	BUILDING USE	GSM	REPLACEMENT VALUE	REQUIREMENTS	FCI
001 - University College	Academic / Admin	16,922	42,513,817	5,172,361	12.2%
003 - Sigmund Samuel Library	Library	17,818	26,026,040	8,507,916	32.7%
004 - McMurrich Building	Administration	5,400	9,386,280	638,656	6.8%
005 - Medical Sciences Building	Acad & Research	72,372	250,542,456	24,506,664	9.8%
006 - John P. Robarts Library Building	Library	80,882	118,141,102	30,191,221	25.6%
006A - Claude T. Bissell Building	Academic	9,298	14,806,228	1,117,156	7.5%
006B - Thomas Fisher Rare Book	Library	6,383	9,323,393	792,787	8.5%
007 - Mining Building	Acad & Research	11,064	17,618,424	3,998,806	22.7%
008 - Wallberg Building	Acad & Research	17,160	59,405,689	3,864,630	6.5%
008A - D.L. Pratt Building	Acad & Research	8,130	28,145,003	1,192,793	4.2%
009 - Sanford Fleming Building	Acad & Research	21,833	75,583,008	2,449,562	3.2%
010 - Simcoe Hall	Administration	5,893	10,243,213	1,472,730	14.4%
010A - Convocation Hall	Academic	4,348	12,702,247	3,225,756	25.4%
011 - Tanz Neuroscience Building	Acad & Research	5,421	18,766,797	1,019,027	5.4%
014 - Bloor Street West-371	Administration	16,568	28,798,498	3,670,416	12.7%
016 - Banting Institute	Acad & Research	9,466	32,770,061	6,701,330	20.4%
018 - Central Steam Plant	Utilities	3,264	30,822,866	3,956,819	12.8%
019 - Kings College Circle-21	Administration	2,331	4,051,744	683,651	16.9%
020 - Rosebrugh Building	Academic	5,628	8,962,083	1,970,564	22.0%
021 - Engineering Annex	Acad & Research	1,941	6,719,490	1,217,964	18.1%
022 - Mechanical Engineering Building	Acad & Research	9,723	33,659,762	2,844,015	8.4%
023 - University College Union	Administration	2,090	3,632,838	666,536	18.3%
024 - Haultain Building	Administration	3,258	5,188,072	639,956	12.3%
025 - FitzGerald Building	Acad & Research	9,392	32,513,883	2,010,220	6.2%
026 - Cumberland House	Administration	1,581	2,517,600	254,217	10.1%
027 - Physical Geography Building	Academic	1,952	3,108,384	921,848	29.7%
028 - Architecture Building	Academic	6,452	10,274,229	2,324,862	22.6%
030A - Varsity Arena	Athletic Facility	6,560	9,007,142	1,912,404	21.2%
032 - Wetmore Hall - New College	Residence / Acad	12,919	14,249,915	3,475,420	24.4%
032A - Wilson Hall - New College	Residence / Acad	18,360	20,251,447	1,687,802	8.3%
033 - Sidney Smith Hall	Academic / Admin	28,039	48,737,390	15,384,461	31.6%

BUILDING	BUILDING USE	GSM	REPLACEMENT VALUE	REQUIREMENTS	FCI
034 - Massey College	Academic	7,456	18,732,007	4,916,654	26.2%
036 - Nursing Building	Academic	3,131	10,839,115	1,330,211	12.3%
037 - David Dunlap Observatory	Acad & Research	2,132	7,380,707	471,825	6.4%
038 - Woodsworth College	Academic	5,332	13,395,797	1,301,804	9.7%
039 - St. George Street-49	Academic	787	1,253,227	436,805	34.9%
040 - Flavelle House	Academic	11,512	18,331,824	1,379,339	7.5%
043 - School of Graduate Studies	Academic	1,139	1,813,755	368,511	20.3%
046 - Varsity Newspaper	Administration	724	1,258,457	634,316	50.4%
047 - Canadiana Gallery	Academic	2,864	4,183,330	1,022,764	24.4%
049 - Aerospace	Acad & Research	8,104	28,054,994	6,346,785	22.6%
050 - Falconer Hall	Administration	2,453	4,263,805	1,579,108	37.0%
051 - Edward Johnson Building	Academic	14,881	23,696,653	2,966,103	12.5%
052 - Best Institute	Acad & Research	6,884	23,831,513	3,012,543	12.6%
053 - Institute of Child Study	Academic	2,489	3,963,508	1,134,892	28.6%
054 - Spadina Crescent-1	Administration	8,647	15,030,215	5,146,287	34.2%
056 - Graduate Students Union	Administration	920	1,599,144	234,050	14.6%
057 - Bancroft Building	Administration	3,728	5,936,504	311,706	5.3%
061 - Borden Building South	Administration	2,443	3,890,258	1,212,697	31.2%
061A - Borden Building North	Administration	3,425	5,454,004	2,146,363	39.4%
062 - Earth Sciences Centre	Acad & Research	30,345	105,050,445	4,902,483	4.7%
065 - Dentistry Building	Acad & Research	23,898	82,731,769	6,748,435	8.2%
067 - Huron Street-215	Administration	11,572	20,114,450	3,390,591	16.9%
068 - Clara Benson Building	Athletic Facility	9,988	13,713,924	4,298,823	31.3%
068A - Warren Stevens Building	Athletic Facility	19,568	26,867,647	3,648,461	13.6%
069 - Willcocks Street-47	Administration	458	796,096	185,240	23.3%
070 - Galbraith Building	Academic	19,577	31,174,611	3,684,858	11.8%
071 - College Street-92	Administration	592	1,029,014	404,267	39.3%
072 - Ramsay Wright Zoological	Acad & Research	22,997	79,612,624	8,198,633	10.3%
073 - Lash Miller Chemical	Acad & Research	21,681	75,056,803	6,456,770	8.6%
074 - Spadina Avenue-581	Administration	441	766,546	231,574	30.2%
075 - Faculty Club	Other	1,586	2,756,785	699,308	25.4%
077 - Sussex Court	Academic	3,293	5,243,806	1,702,618	32.5%
078 - McLennan Physical Laboratories	Acad & Research	31,826	110,177,475	11,303,517	10.3%
079 - F. Norman Hughes Pharmacy	Acad & Research	6,196	21,449,747	1,542,842	7.2%

BUILDING	BUILDING USE	GSM	REPLACEMENT VALUE	REQUIREMENTS	FCI
080 - Bahen Information Technology	Acad & Research	29,000	100,394,230	10,843	0.0%
082 - Gage Building	Acad & Research	1,353	3,399,196	738,957	21.7%
083 - McCaul Street-254/256	Academic / Admin	4,391	6,992,272	285,499	4.1%
084 - CIUT Radio	Other	686	1,723,465	414,275	24.0%
088 - St. George Street-123	Academic / Admin	790	1,373,178	332,562	24.2%
089 - Admissions Office	Administration	1,802	3,132,236	311,289	9.9%
090 - College Street-88	Academic	1,734	2,761,239	599,958	21.7%
091 - Studio Theatre	Academic	442	1,291,259	333,695	25.8%
093 - Electrometallurgy Lab	Acad & Research	176	609,289	124,872	20.5%
097 - Centre for Medieval Studies	Academic	799	1,272,336	413,096	32.5%
097A - Queens Park Crsc. E.-39(rear)	Administration	165	286,803	96,512	33.7%
102 - Soldiers Tower	Other	300	753,702	146,988	19.5%
103 - School of Continuing Studies	Academic	1,706	2,716,651	487,429	17.9%
104 - Economics Department	Academic	2,403	3,826,561	1,922,531	50.2%
105 - Fields Inst for Research in Math	Academic	3,239	5,157,816	217,515	4.2%
110 - St. George Street-121	Administration	1,244	2,162,321	616,820	28.5%
111 - Bloor Street West-246	Academic	6,698	10,665,962	2,087,425	19.6%
115 - St. George Street-97	Administration	1,039	1,805,990	460,192	25.5%
117 - W.B. MacMurray Field House	Athletic Facility	368	924,541	79,794	8.6%
120 - Louis B. Stewart Observatory	Other	537	855,124	242,107	28.3%
122 - North West Chiller Plant	Utilities	1,316	12,427,356	2,228,040	17.9%
123 - Ont. Inst. for Studies in Educatio	Academic / Admin	38,156	66,322,759	6,272,709	9.5%
125 - Spadina Avenue-703	Administration	705	1,225,431	234,980	19.2%
132 - Innis College	Academic	3,361	5,352,090	111,771	2.1%
134 - Joseph L. Rotman School	Academic	9,987	15,903,399	1,214,526	7.6%
136 - Spadina Avenue-705	Administration	325	564,915	170,644	30.2%
138 - Huron Street-370	Other	443	705,438	254,278	36.0%
142 - Spadina Ave-713	Administration	311	540,580	277,623	51.4%
143 - Koffler Student Services Centre	Administration	11,511	28,919,546	718,004	2.5%
145 - Koffler Institute for Pharmacy	Academic	2,118	3,372,724	184,576	5.5%
146 - Sussex Avenue-40	Administration	375	651,825	172,726	26.5%
153 - Spadina Road-56	Academic	899	1,562,642	126,962	8.1%

BUILDING	BUILDING USE	GSM	REPLACEMENT VALUE	REQUIREMENTS	FCI
154 - Health Sciences Building	Academic	14,340	24,925,788	6,492,061	26.0%
155 - 255/257 McCaul Street	Academic / Admin	6,628	11,520,790	2,224,304	19.3%
156 - Old Administration Building	Academic / Admin	3,093	5,376,253	447,024	8.3%
St. George December 2005		867,957	2,089,395,371	262,876,320	12.6%
	St. George January 2005	-	1,980,206,646	247,488,670	12.5%
	St. George January 2003	-	2,013,741,422	273,165,188	13.6%
	St. George October 2003	-	2,013,741,422	248,483,044	12.3%
00x - CCBR	Acad & Research	20,628	71,411,454	In Construction	0.0%
00x - Leslie Dan Pharmacy	Acad & Research	16,500	57,120,855	In Construction	0.0%

UTM (Mississauga)					
BUILDING	BUILDING USE	GSM	REPLACEMENT VALUE	REQUIREMENTS	FCI
301A - Principals Garage	Storage	67	45,015	1,247	2.8%
304 - Colman Place Garage	Storage	107	71,890	10,512	14.6%
311 - North Building	Acad & Research	9,459	32,745,828	1,597,239	4.9%
312 - Central Utilities Plant	Maintenance	3,181	30,039,074	3,351,357	11.2%
313 - South Building	Academic / Admin	52,478	181,672,014	6,687,396	3.7%
314 - Kaneff Ctr for Mgmt	Acad & Research	3,376	11,687,273	34,857	0.3%
316 - Drama Workshop	Academic	418	1,221,145	60,281	4.9%
317 - Rock Magnetism Laboratory	Acad & Research	209	723,531	46,702	6.5%
322 - Geomorphology Building	Acad & Research	60	207,712	67,907	32.7%
328 - Student Centre	Administration	2,991	7,514,409	33,819	0.5%
329 - CCIT	Academic	11,414	39,513,784	-	0.0%
330 - Springbank Centre	Administration	543	943,843	253,138	26.8%
UTM December 2005		84,303	306,385,518	12,144,455	4.0%
	UTM January 2005	-	311,268,924	11,387,392	3.7%
	UTM January 2003	-	251,473,702	21,436,566	8.5%

UTSC (Scarborough)					
BUILDING	BUILDING USE	GSM	REPLACEMENT VALUE	REQUIREMENTS	FCI
200ARC - Academic Resource Centre	Library	8,737	12,761,786	6,300	0.0%
200ART - Arts and Administration	Academic / Admin	8,737	15,186,653	-	0.0%
200B - Bladen Wing	Academic / Admin	9,253	32,032,683	801,152	2.5%
200CP - Central Plant	Utilities	1,486	14,032,714	724,736	5.2%
200DC - Daycare Centre	Other	495	545,995	25,147	4.6%
200H - H-Wing	Academic / Admin	9,216	31,904,594	2,389,699	7.5%
200M - Management Building	Academic / Admin	5,069	8,071,926	2,500	0.0%
200PAV - Pavilion	Academic	560	891,750	138,875	15.6%
200POR - Portables	Other	783	1,246,857	51,700	4.1%
200R - R-Wing	Athletic Facility	8,050	11,052,972	1,359,023	12.3%
200S - S-Wing	Academic / Admin	29,771	103,063,332	5,793,795	5.6%
200SC - Student Centre	Multi-Use	4,913	8,539,777	-	0.0%
200SEL - Soil Erosion Laboratory	Research	323	1,118,184	25,667	2.3%
UTSC January 2005		87,393	240,449,223	11,318,594	4.7%
UTSC January 2005		-	96,800,114	13,409,795	13.9%

UNIVERSITY OF TORONTO SUMMARY					
St. George December 2005		867,957	2,089,395,371	262,876,320	12.6%
UTM December 2005		84,303	306,385,518	12,144,455	4.0%
UTSC January 2005		87,393	240,449,223	11,318,594	4.7%
TOTAL UNIVERSITY OF TORONTO		1,039,653	2,636,230,112	286,339,369	10.9%