

REAL ESTATE OPERATIONS

TO:	Business Board
SPONSOR:	Nadeem Shabbar, Chief Real Estate Officer
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DATE:	April 12, 2010 for April 26, 2010
AGENDA ITEM:	6(e)

ITEM IDENTIFICATION:

University of Toronto Mississauga: Chemistry Undergraduate Teaching Laboratories Renovation

JURISDICTIONAL INFORMATION:

Pursuant to Section 5.2. (b) of its Terms and Reference, the Business Board approves expenditures for, and the execution of, approved Capital Projects.

PREVIOUS ACTION TAKEN:

This is the second time this Project is being presented to the Business Board. Other Board and Committee approvals to-date include:

- January 18, 2010 Planning and Budget
- January 28, 2010 Academic Board
- February 8, 2010 Business Board
- February 25, 2010 Governing Council

HIGHLIGHTS:

On February 8, 2010 Business Board approved the UTM Undergraduate Teaching Laboratories renovation project. The project is designed to upgrade the teaching laboratories that have been in service with minimal modifications since 1970. The renovations will provide for the optimal use of these facilities, recognizing the substantial increase in course enrollments and the need for safe and reliable teaching laboratory facilities. The renewed laboratory space will allow for the elimination of Saturday and most evening classes and for the restoration of 3 hour laboratory sessions in first-year Chemistry required for CSC accreditation.

The approved project carried a total project cost of \$4.24 million, to be funded internally by UTM. As noted in the original P&B paper: "In terms of operating cost, the cost of electrical power to operate the large number of additional fume hoods will be offset by incorporation of a variety of 'green' initiatives. The two most significant are 1) the ability to turn off the fume hoods when not in use instead of the current 24/7 operation - using variable air velocity, or VAV, control systems - and 2) utilization of re-circulating chilled water for cooling of all chemistry experiments rather than utilizing domestic cold water."

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As design work progressed to fine details since the February 8th approval, it became evident that the total cost of the project, in keeping with the initial conceptual design, would be substantially higher than expected. The unit cost originally anticipated, about \$265/GSF, was consistent with work that had been last done on chemistry labs on the St. George campus in 2007. That comparison for estimating costs has proven misleading.

The cost of the UTM teaching laboratory project has been impacted by:

- further investigation of the aging infrastructure (~45 years) within the South Building D block, including the existing chemistry labs, has resulted in the conclusion that significantly more work needs to be done in replacing existing infrastructure;

- the premium cost related to the evolving technology for VAV design;

- the market impact of the hundreds-of-millions of dollars in government stimulus spending, much of it directed to the university sector and within that sector, much being focused on laboratory projects, which is impacting both the cost and availability of lab equipment and major, related mechanical equipment.

- along with the issue of equipment availability, was the impact of all this on the design and planning schedule, resulting in the decision to do the renovation project in the summer of 2011 with an attendant allowance for escalation.

In order to ameliorate the increase in project cost, consideration was given to eliminating the VAV fume hood design in favor of the older but standard constant velocity systems. This approach was rejected on two grounds: (1) the VAV approach to laboratory design takes advantage of the most recent technological advances in exhaust system controls and resulting enhanced performance; and (2) the operating cost advantage of the VAV could be as much as \$50,000 per year (with significant advantages in terms of environmental impact).

FINANCIAL AND/OR PLANNING IMPLICATIONS:

The Total Project Costs for the revised scope is estimated to be \$6.74 million, an increase of \$2.5 million. Because of the high priority of this project, UTM will provide the additional \$2.5 million to fund the teaching laboratory renovations, for a total revised TPC of \$6.74 million. The additional cost will be funded by internally reallocating committed monies from other planned projects at UTM, which by necessity, must now be accorded a lower priority. The process is underway to make those reallocation decisions within the framework provided by UTM governance. There will be no additional financial commitment required by the university.

RISK IMPLICATIONS N/A

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RECOMMENDATION:

THAT the Vice-President, Business Affairs be authorized:

To execute the University of Toronto at Mississauga Chemistry Undergraduate teaching laboratories renovations at a total project cost not to exceed \$6.74 million with funding from the University of Toronto at Mississauga operating budget and with the additional cost to be funded by internally reallocating committed monies from other planned projects at UTM.