



**TO:** Planning and Budget Committee

**SPONSOR:** Gail Milgrom, Acting Assistant Vice-President, Campus and Facilities Planning

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**DATE:** February 17th, 2012 for February 29<sup>th</sup>, 2012

**AGENDA ITEM:** 6

**ITEM IDENTIFICATION:**

Development of Site 10 on St. George Street at Galbraith Road for the *Centre of Engineering Innovation and Entrepreneurship* within the Faculty of Applied Science and Engineering

**JURISDICTIONAL INFORMATION:**

The Planning and Budget committee recommends to the Academic Board approval in principle of capital projects and infrastructure projects over \$2 million.

Under the Policy on Capital Planning and Capital Projects, section 5.A, the membership and term of reference of Project Committee shall be reported to the Planning and Budget Committee.

**BACKGROUND:**

In 2009 the Faculty of Applied Science and Engineering [FASE] completed a divisional space audit which included an extensive review of the quantity and quality of its existing facilities. The study identified significant deficiencies in the quality of existing laboratories and support infrastructure, many of which are outdated and ill-configured to fully maximize their use without extensive renovation. The Bahen Centre of Information Technology [BCIT], opened in 2001/2, was the last significant capital project that provided for the expansion of FASE facilities; the project was undertaken jointly with the Faculty of Arts and Science and also provided a boost to classroom facilities in support of both Faculties and the University inventory.

Since this opening, now 10 plus years past, FASE has increased its undergraduate enrolment by a staggering 41% from 3,605 to 5,095; the graduate enrolment has also increased tremendously in the last 5 years from 1,286 to 1,859 in 2011, which corresponds to a 45% increase, with an overall FTE Graduate Student-Faculty ratio in excess of 7.5! Space demands for graduate student expansions can usually be accommodated with modest expansions, but when this expansion is elevated to a 45% level, the research

laboratory space and office accommodations are at a premium, seriously strained and simply give rise to an unsustainable situation.

The need to plan for and acquire new, preferably permanent, space has been in sharp focus for some three years within FASE. Project Planning Committees for both Sites 16 (200 College Street – Wallberg/Engineering Annex) and 17 (5 King’s College Road – Haultain/Mechanical) have been established respectively. Given the serious and confounding difficulties associated with these sites and other sites that have been extensively investigated, the focus has shifted specifically to Site 10 (47- 55 St. George Street – Simcoe Hall Parking Lot) which provides the best opportunity to address the pressing space needs of FASE; an additional advantage is that Site 10 is immediately adjacent to FASE.

The existing Secondary Plan for the University of Toronto Area includes approved development envelopes on sites across the campus. Site 10, has an approved envelope of 10,490 gross square metres with a maximum height of 23metres. The recently completed St. George Master Plan, still to be approved by the City Planning Department, proposes additional capacity and height.

The Faculty requires additional good quality space, beyond that which exists, if it is to expand its faculty, solidify the recent sudden graduate student expansion, and ensure a further substantial increase in the overall graduate student enrolment numbers. Site 10 offers this unique opportunity and potential. The faculty plan is to target specific new areas of engineering innovation for growth that the entrepreneurial, academic and business communities have identified as critically important areas and in which leading engineering faculties need to invest to maintain their relevance at the forefront of engineering innovation and technology transfer. The new target areas planned for inclusion within the Centre for Engineering Innovation and Entrepreneurship [CEIE] that offer considerable potential for external fundraising within the Boundless Campaign are listed below:

- A. Centre for Sustainability of Integrated Systems [Energy, Infrastructure, Water];
- B. Centre for Global Engineering;
- C. Institute for Multi-Disciplinary Design and Innovation;
- D. Engineering Design and Entrepreneurship;
- E. Institute for Robotics and Mechatronics
- F. Engineering - Leaders of Tomorrow and I-Lead
- G. Security Systems and ICT
- H. Centre for Water Innovation

In addition to establishing and identifying the space requirements for these emerging initiatives, the Faculty will also relocate and expand selected research undertakings to Site 10 that are high demand areas that complement the emerging initiatives or where the integration of existing research capabilities into new space satisfy this requirement. This approach will assist the fund- raising requirements of the project and simultaneously allow pockets of inferior space in existing FASE buildings to be vacated, reassigned, updated and effectively used as sequential swing space.

The Faculty Space Plan also calls for the investigation and resolution of the following issues within the planning for Site 10:

- (a) creation of swing space, the equivalent of 1000 nasm, to allow for the sequential re-assignment and systematic renovation of poor quality space in existing buildings.
- (b) with the University and OSM, consideration of a 500-seat auditorium (or, with *moving-wall* technology, twin 250-seat auditoriums) on either the ground floor or first level basement. In addition, FASE will consider 180-seater classrooms to address pressing requirements and the need for new emerging innovative classrooms that blend an experimental “*learn and do*” element into the classroom environment [now being used at MIT].
- (c) potential of a basement parking level to address the loss of 69 parking spaces that currently exist on Site 10, as well as the delivery of services for the site.
- (d) the potential for urgently needed undergraduate student club space and work space [as identified in the recently completed Student Club and Study Space Audit Report]
- (e) the potential to link the proposed structure either above ground [floor two or three] or underground into the Galbraith Building

#### **PROPOSED COMMITTEE MEMBERSHIP:**

Ron Venter [Chair], Professor Emeritus, Department of Mechanical & Industrial Engineering, Faculty of Applied Science and Engineering

Jim Dawson, Executive Director of Advancement, Faculty of Applied Science and Engineering

Steve Miszuk, Director, Facilities and Infrastructure Planning, Faculty of Applied Science and Engineering

Gail Milgrom, Acting Assistant Vice-President, Campus and Facilities Planning

Jennifer Adams, Senior Planner, Campus and Facilities Planning

Stewart Aitchison, Vice-Dean-Research, Faculty of Applied Science and Engineering

Susan McCahan, Vice-Dean Undergraduate Studies, Faculty of Applied Science and Engineering

Kim Pressnail, Chair, First Year Studies, Faculty of Applied Science and Engineering

Mark Kortshot, Chair, Division of Engineering Science, Faculty of Applied Science and Engineering

Greg Jamieson, Associate Professor, Department of Mechanical & Industrial Engineering Faculty of Applied Science and Engineering

Steve Bailey, Director, Office of Space Management

Julian Binks, Director, Planning and Estimating, Real Estate Operations

Ron Swail, Assistant Vice-President, Facilities and Services

Chirag Variawa, MIE Ph.D. Candidate, Graduate Student Representative, Faculty of Applied Science and Engineering

Nikola Radovanovic, Vice-President, Student Life, Engineering Society, Faculty of Applied Science and Engineering

## **TERMS OF REFERENCE:**

- 1.** Make recommendations for a detailed space program and functional layout for the Centre for Engineering Innovation and Entrepreneurship.
- 2.** Identify the space program as it is related to the existing and approved academic plan for the Faculty of Applied Science and Engineering taking into account the impact of approved and proposed programs that are reflected in increasing faculty, student and staff complement. Plan to permit maximum flexibility of space to permit future allocation as program needs change.
- 3.** Demonstrate that the proposed space program will be consistent with the Council of Ontario Universities and the University of Toronto space standards.
- 4.** Identify all secondary effects, including space reallocations from the existing site i.e. Site 10, impact on the delivery of academic programs during construction, the possible required relocation as required to implement the plan of existing units and the loss of existing parking spaces on Site 10.
- 5.** Address campus-wide planning directives as set out in the campus Master Plan, open space plan, urban design criteria and site conditions that respond to the broader University community.
- 6.** Identify equipment and moveable furnishings necessary to the project and their estimated cost.
- 7.** Identify all data, networking and communication requirements and their related costs.
- 8.** Identify all security, occupational health and safety and accessibility requirements and their related costs.
- 9.** Identify all costs associated with transition during construction and secondary effects resulting from the realization of this project.
- 10.** Determine a total project cost estimate [TPC] for the capital cost including costs of implementation in phases if required, and also identifying all resource costs to the University.
- 11.** Identify all sources of funding for capital and operating costs.
- 12.** Complete report by September 1<sup>st</sup>, 2012

## **RECOMMENDATION**

Be It Recommended to the Academic Board:

THAT Site 10 on the University of Toronto St. George Campus, at 47-55 St. George Street be assigned for the *Centre of Engineering Innovation and Entrepreneurship* within the Faculty of Applied Science and Engineering for a five-year period beginning March 2012 to March 2017. If the Faculty is unable to initiate a capital project for the site by March 2017, the Site will become available for other institutional purposes.

Subject to the approval of the above recommendation a Project Planning Committee for the development of Site 10 on St. George Street at Galbraith Road, to accommodate the *Centre of Engineering Innovation and Entrepreneurship* within the Faculty of Applied Science and Engineering will be struck with the Proposed Committee Membership and Terms of Reference above.