

Project Planning Report for the Relocation of the  
John H. Daniels Faculty of Architecture, Landscape, and Design  
February 2011

Interim Project Planning Report for the Relocation of the  
John H. Daniels Faculty of Architecture, Landscape and Design  
to 1 Spadina Crescent

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## **Table of Contents**

### **I Executive Summary**

### **II Project Background**

- Membership
- Background Information
- Statement of Academic Plan
- Space Requirements

### **III Project Description**

- Vision Statement
- Building Considerations)
- Site Considerations

### **IV Resource Implications**

- Secondary Effects
- Funding
- Schedule

### **V Recommendations**

#### **Membership**

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Julian Binks, Manager, Capital Projects Planning  
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#### **Background Information**

The School of Architecture at the University of Toronto was established in 1890 and was originally housed within the Faculty of Applied Science and Engineering. In 1961, the Faculty relocated to 230 College Street, which was purpose built in 1909 for the dentistry program. The building underwent renovations at this time to accommodate the relocation of the School.

Granted Faculty status in 1967, the school then had three departments: Architecture, Landscape Architecture, and Urban and Regional Planning. In 1998, the Faculty shifted its

Project Planning Report for the Relocation of the  
John H. Daniels Faculty of Architecture, Landscape, and Design  
February 2011

professional programs to the graduate level, and the name of the division was changed to Faculty of Architecture, Landscape, and Design. In recognition of the significant gift of \$14 million to the Faculty in 2008, it was renamed to be the John H. Daniels Faculty of Architecture, Landscape and Design.

**Planning to 2009**

In 1997, a Users Committee for the School of Architecture and Landscape Architecture (now the Daniels Faculty of Architecture, Landscape, and Design) addressed the issue of facilities renewal and its role in supporting the academic program and vision of the Faculty. This resulted in a report that was approved by Governing Council in 1997. Specifically, the Users Committee Report addressed the space requirements for the Academic Plan for 2000 and identified projected enrolment in the masters programs and faculty and staff complements. The report also addressed facilities renewal and examined alternative strategies to renovate the existing building at 230 College Street. An ambitious multi-phased project was proposed, valued at approximately \$10 million (1997), which was to be implemented as funding permitted.

A project planning committee was reconstituted in 2008 to review the recommendations of the previous report and address the present requirements of the Daniels Faculty of Architecture, Landscape, and Design. A comprehensive plan was prepared that addressed space shortages and building renewal. The report went forth for Governance approval in the spring of 2009, which was followed by an international competition to identify a design team to implement the project.

The results of the competition indicated that the proposed renovations were estimated to cost in excess of the estimated and approved budget. The physical constraints of 230 College are such that the 2009 proposal cannot accommodate the proposed expansion of Faculty programs now contemplated. The Faculty's new academic plan involves an expansion in the number and size of programs, including the proposed repatriation, and growth of the undergraduate program from the Faculty of Arts & Science (currently in consultation phase), an alignment with the program in Visual Studies, and the creation of a new PhD program, none of which can be suitably accommodated at 230 College. The existing facility already lacks adequate space to accommodate the current need for studio space, faculty and research offices. The new project is also intended to address insufficient digital media infrastructure and teaching facilities in the current facility, including workshops that are poorly equipped to support contemporary design teaching, and inadequate studio spaces for multi-media based design research and instruction. The current lack of space also creates long-term limitations in the establishment of innovative interdisciplinary program initiatives, such as the Health Care Design program. Relocating the Faculty from its existing building to a different site will allow for the additional space that such expansion would require.

**New Directions**

One Spadina Crescent presents a unique opportunity for the Daniels Faculty. It has been occupied by a number of different university departments over the years; none of which have fully utilized the building. The relocation of the Daniels Faculty to the site promises the creation of an integrated community on an important, though neglected, site within the university and the city. It also offers an opportunity for design research and innovation that could potentially serve as a demonstration project for buildings of comparable age on campus and across the country. The new complex will accommodate an expansion of the Faculty's

curricular programs and an intensification of its research activities, industry interfaces and public programs.

## **Statement of Academic Plan**

### **Background**

The Daniels Faculty of Architecture, Landscape and Design at the University of Toronto is the oldest faculty of its kind in Canada, and among the longest standing in North America. The Faculty has educated many of the design professionals that have given form to the built environment in Canada (and internationally) throughout the past 100 years. Starting in 1998 the faculty initiated a process of transformation from a division focusing exclusively on undergraduate professional education in Architecture and Landscape Architecture, to becoming a Graduate Faculty with a depth of capacity in both professional education and design research. Over the past decade, the process of mounting new Graduate Professional Programs in Architecture, Landscape Architecture and a Post-Professional Program in Urban Design has been achieved with great success. In 1998, the Faculty had less than four tenured-stream faculty; thus a majority of the Faculty's 19 current tenure-stream academic staff were hired in recent years to build the new graduate programs. The impact of this investment in the renewal of the faculty is now evident. In peer-reviewed measures of excellence in creative practice and design scholarship over just the past 5 years, the accomplishments of the Daniels Faculty's combined tenure-stream and adjunct faculty, as well as its current students and recent alumni, exceed, by a wide margin, any other Faculty of its kind in Canada, and place the school in high standing internationally.

Despite the successful mounting of professional graduate programs and their attendant practice-based activities, key historical mandates, such as the creation of doctoral programs, remain unfulfilled, and these provide the key to a perhaps even more overarching transformation of the faculty's mission in the coming years than has already occurred. Historically schools such as Daniels have struggled to manage tensions between the advancing of Architecture, Landscape Architecture and Urban Design as an art and a craft, and the training of individuals for a service-based profession. As professional training and the teaching of design have fallen more and more to the schools, they have almost by default utilized a practice-based pedagogy. Today both the needs of the design professions and the role of art, architecture and design faculties within research universities have changed.

### **Expanding the Mission: Proposed New, Expanded and Realigned Programs**

The Daniels Faculty is in an unparalleled position to advance the study, and creation of more ecologically sustainable, socially just and beautifully crafted buildings, landscapes and cities. Breaking from the traditional approach of its peers at the majority of other design schools, the Daniels Faculty is actively engaging emerging forms of scholarship, technology, and information in an effort to model new modes of practice better suited to the trans-disciplinary, network-based ways in which the built environment will be made and remade in the future. An important outcome of this change from a traditional practice-based pedagogy, to an urban-focused, information-based pedagogy will be a marked increase in the faculty's ability to undertake innovative research and prepare students with highly advanced and transferrable skills in environmental and programmatic analysis, urban morphology, parametric design, digital fabrication, embedded responsive media, and intelligent buildings. Among the many changing realities underscoring the Faculty's renewed mission, vision and focus, is the yet unrealized potential within the sustainable urbanism sector, as new

environmental and design standards are brought to bear on vast amounts of new and existing, aging infrastructure in Canada and beyond.

Building on the recent transformation of its professional programs, and on the outstanding research and creative accomplishments of its faculty, students and alumni, the faculty is now embarking on a new phase of growth and renewal that is focused on advancing a globally-attuned mode of design research, education, and civic advocacy. This expanded mission would involve the proposed creation of a new PhD program, and the proposed re-absorption of current undergraduate programs in architecture from the Faculty of Arts & Science. A new strategic alignment with University of Toronto's programs in Visual Studies is also in discussion. Together with reforms to the Daniels's graduate professional programs in architecture, landscape architecture, and urban design, which will continue to be at the core of our mission, this new base of undergraduate studies, raised ceiling of post-graduate studies and new alignments with related visual studies media will set the stage for an intensification the faculty's research activities, industry interfaces and public forms of outreach.

### **Strategic Academic Priorities**

1. Proposal to reintegrate and expand the undergraduate program in Bachelor of Arts in Architectural Studies (by 2012), currently housed in the Faculty of Arts and Science. This proposal is currently in consultation phase with students.
2. Propose to develop a new PhD in Architecture, Landscape and Design (by 2012-13).
3. Continue to build and further the prospects of an internationally recognized faculty complement by refining, expanding and funding research activity and developing further supports for creative practice, keyed to partners in cognate disciplines, industry and government.
4. Further enhance the student experience by continuing development of our innovative pedagogies, and forms of curricular and extra-curricular enrichment that build upon the Faculty's strengths in creative practice and emerging genres of research.
5. Expand networks of affinity to expand our pool of domestic and international students and placement opportunities for existing students and alumni.
6. Cultivate new constituencies for Architecture, Landscape Architecture and Urban Design, in both the Greater Toronto Area, and internationally, through civic outreach and stellar public programming, thereby garnering new sponsors from both the public and private sector.
7. Propose to build a new physical platform for the Faculty that can accommodate planned growth in its core educational programs, exemplify the most innovative urban design and sustainable building techniques, and create an unparalleled site for educating designers of the built environment, conducting pioneering research and staging civic outreach.

## Space Requirements

The programs proposed above for the relocation to 1 Spadina will be analyzed using projected student and program numbers, in conjunction with Council of Ontario Universities (COU) space standards for the final Project Planning report.

Figure 1. Space Requirements Overview

<b>EXISTING</b>		<b>2009 APPROVED PLAN</b>	
Scheduled Teaching Labs	1601.92		
Unscheduled Teaching Labs	41.96		
Laboratory Support Space	188.73		
Research Labs	131.55		
Research Support Space	127.77		
<b>2091.93</b>		<b>3805.13</b>	
Faculty Offices	373.16		
Non-Academic Offices	109.28		
Office Support Space	373.41		
<b>855.85</b>		<b>731.74</b>	
Library Collection Space	102.72		
Library Office Space	19.05		
Library Support Space	89.75		
Study Space	106.03		
<b>317.55</b>		<b>491.94</b>	
Tiered Classroom	136.05		
Flat Floor Classrooms	365.25		
Classroom Support	5.22		
<b>506.52</b>		<b>428.55</b>	
Student Club Offices	10.19		
Lounge space	128.1		
Exhibition space	198.65		
<b>336.94</b>		<b>270.59</b>	
<b>TOTAL</b>		<b>5727.95</b>	

### Overview of Existing Space

The Faculty of Architecture, Landscape, and Design currently occupies approximately 4108nasm (6530gsm) within its building located at 230 College Street.

#### *Design Studios*

The School provides permanent studio space for each graduate student enrolled in its MArch, MLA and MUD programs. These design studios are currently located on the third and fourth floors, and are arranged in a flexible open plan manner. Students are provided with individual work stations and shared modeling tables that are arranged in conjunction with moveable partitioning to subdivide the space according to the needs of each studio class. As a result of overcrowding, there is a lack of “flex space” needed for group meetings, in-class critiques of large format projects.

### *Studio Support Facilities*

The existing workshops were created for a time when the curricular requirements of the programs were limited to the production of wood based models. The wood shop has been recently upgraded with the addition of a modern dust collection system. It lacks a suitable shipping and receiving area for materials at grade and the existing freight elevator is too small to be of any use in moving materials to the basement. To address the needs that come with digitally-based modes of fabrication and rapid prototyping, new shops and labs have been retrofitted in areas adjacent to the original woodshop. These house three laser cutters, a Computer Numeric Control (CNC) machine, a computer driven post forming machine and rapid prototyping machines. Two of the laser cutters are dedicated to student use and are located in their own room with access managed by the shop supervisor. The other equipment is located in a research lab next door and made available for student use. Each of these pieces of equipment require environmental control technologies that have space and operational implications that are only being minimally met in the existing facilities. Due to space limitations, the faculty is falling behind its North American peers in developing digitally-based fabrication laboratories.

Existing computing facilities include two teaching labs. One includes 12 high-end workstations with a full software complement and a dedicated ceiling-mounted LCD projector and screen. The second teaching lab includes a dedicated three-screen theatre. In addition to teaching labs, a secondary support lab includes 12 later-generation high-end workstations that are meant to complement the personal computing resources of students. A 3-dimensional modeling lab is located on the 3<sup>rd</sup> floor. All of these digital technologies/labs have been retrofitted into the existing studio floors, but lack the level of integration with studio and instructional spaces that the faculty's curricula will ultimately require.

The IT staff includes three technologists who oversee the information technology needs of the Faculty. They are located, along with the Faculty's server room, on the main floor, where they are central to both classroom and administrative facilities. Although conveniently located, this overcrowded facility is without access to natural light and air, and cannot be expanded without affecting adjacent classrooms.

The audio-visual resources of the Faculty include a media/photo lab with a full-time staff member. This lab, located Room 102, also requires expansion.

### *Library*

The library's collection holds approximately 30,000 volumes. Space shortage is a major concern. This is a research collection focused on the undergraduate and graduate programs offered at Daniels. Book shelves are at 100% capacity and the library has had to relocate approximately 6300 items to the off-site book storage facility at Downsview.

At present, the library seats 45 in a combination of lounge seating, carrels and tables. In addition to computer workstations for staff, the library has 10 workstations for users, 5 flatbed scanners, a digital copier, and wireless access.

### *Lecture Hall and Classrooms*

The Faculty currently has a sufficient supply of large to small classrooms for its lecture and seminar based graduate courses, including a tiered lecture hall, which seats approximately 170. The tiered lecture hall, while sufficient for current classes, also hosts the school's many public lectures, conferences and symposia. The lecture hall is not properly sized or equipped

Project Planning Report for the Relocation of the  
John H. Daniels Faculty of Architecture, Landscape, and Design  
February 2011

for these functions, lacks proper ventilation, and is poorly positioned for public access at the rear of the building.

*Offices*

Offices are provided for full-time faculty and staff. Currently, sessional faculty share a single office space. Recent growth in the full-time faculty complement has created a shortage of proper faculty offices. Future growth in the number of academic programs, coupled with a planned increase in research endeavors within the school, will directly affect the number of faculty and administrative staff complements and ultimately increase the space needs in general.

Figure 2 shows the existing and planned growth to Daniels Faculty academic and administrative staff, and student, complements. The undergraduate program is proposed to move to the Daniels Faculty and subsequently to grow to the numbers projected. The proposal to transfer the BA Architectural Studies Major to Daniels in currently in consultation, and will be brought forward to governance in the subsequent cycle. In addition, the Daniels Faculty also proposes to engage in a strategic alignment with the Faculty of Arts and Science (FAS) Visual Studies programs, housed at 1 Spadina, as illustrated in the table. Arts and Science Visual Studies faculty are currently housed in the building.

**Figure 2: Existing and Planned Growth Complement Plan**

Faculty/Staff	Existing		Projected	
	Visual Studies (FAS)	Architecture, Landscape & Design	Visual Studies (FAS)	Architecture, Landscape & Design
Faculty	7.5	27.31	7.5	30.31
Sessional	-	7.33	-	10.3
Non-academic staff	-	19	-	21
<b>Student Enrolment</b>				
MArch		259		272
MLA		67		67
MUD		12		17
PhD		-		25
FAS Architectural Studies Undergraduate Program		156		420
FAS Visual Studies Undergraduate Program	156		156	
FAS MVS	13		13	

## **Project Description**

The John H Daniels Faculty of Architecture, Landscape and Design plans to relocate to One Spadina Crescent, which occupies a landmark position in the city, at the western edge of the St. George Campus. The upgraded heritage building, integrated with a new complex, will become a working prototype of how sustainable and creative techniques can be brought to bear in transforming a currently under-utilized site into an urban design exemplar.

The John H Daniels Faculty of Architecture, Landscape and Design is the oldest and foremost school of its kind in Canada, and among the most highly respected internationally. Building on the Faculty's record of urban innovation, the new complex will accommodate an expansion of the faculty's curricular programs and an intensification of its research activities, industry interfaces and public programs.

The creation of a new, digitally-conditioned breed of design studio-laboratories will support all undergraduate, graduate and doctoral program streams, and provide students with the up-to-date studios and laboratory with media and fabrication infrastructure that is essential for training in architecture, landscape architecture and urban design today. The new complex will replace technologically dated instructional space and equipment currently in use within the current facility. For example, the current digital output needs for the Faculty's graduate students have outgrown the available equipment, which now includes three-dimensional plotters, as well as the space required to support it. The new complex will need to house facilities such as a new grant-funded laboratory for design research using metals and imbedded sensors, and new computer labs for instruction and high-end visualization in support of urban design and building science research.

## **Space Program and Functional Plan**

The proposed 2009 space program requested a total of 5727.95 nasm of existing and new space. Academic planning currently underway would result in adjustments to the overall space; while the new location at Spadina Crescent will create new functional relationships within that space. Subsequently, a detailed space program will be determined using COU standards as the base guideline.

## **Building Considerations**

One Spadina Crescent lies on the western edge of the St. George campus. Its circular site, north of College Street, is the centre of a roundabout of Spadina Avenue, and an important terminus from both its northern and southern vantages. The existing building consists of an original three-storey 1875 structure, designed by Toronto architects Smith & Gemmell, for use as a college and residence. Subsequent additions were constructed in 1914-23 (when the building was used as a military hospital), along with smaller, infill additions to the north and inner east facades between 1943 and 1972 (during its use by Connaught Laboratories), and the addition of laboratories and an animal colony in 1988. The building has been designated a heritage building under Part IV of the Ontario Heritage Act.

This original building is composed of an axially symmetrical central block and square tower with gabled wings along the east and west side. The resulting c-shape created an academic quadrangle facing north with teaching spaces located around its perimeter at the Ground

floor. The west wing terminated at the college dining room and the east wing terminated at a 3-storey lecture hall that also doubled as the college chapel. In addition a library (2<sup>nd</sup> floor) and museum (3<sup>rd</sup> floor) were located within the central block. The remainder of the spaces were simple sleeping quarters with the benefit of having indoor washroom facilities located at every floor.

The principal aspect of the building faces south along Spadina Avenue, with secondary frontages facing east along Russell Street and west toward the residential district beyond. A 128 space parking lot and Grounds' storage/recycling site currently occupy the north half of the site.

The interior spaces are organized along a 2.5m wide corridor. Originally a single-loaded corridor, the infill additions and sheds on the courtyard edges have created a double-loaded condition. Most of the original interior walls are solid masonry, with some of the larger areas broken into offices with partitions. The existing interior spaces appear to be best suited to offices, seminar rooms and smaller classrooms, given the nature of their construction.

The majority of the existing windows are single hung, non-insulated glass, with original exterior and interior trim and mouldings.

One Spadina Crescent currently has 4667 nasm (or 9168 gsm) of space. However, 880 nasm of this total is located in the basement, and numerous additions were purpose-built for animal lab and maintenance uses. The basement space is unsuitable for most uses, except storage. Many of the rooms at the basement level are half-height; others are exposed to the original masonry foundation walls and have little or inadequate flooring over the ground below. Some of the later additions and sheds are of poor construction quality, lack proper light and ventilation, and require repair. It is anticipated that the various sheds and additions will be removed in the renovation process.

It is important to note that the Military Hospital wing houses the site's sub-station. If this wing is demolished, the sub-station will have to be replaced in advance if the supply of power is to be continuous. Current zoning permissions do not include demolition of the Military Hospital wing, and if this is to be included in the area of new construction, will need to be negotiated with the City.

The retrofit of the existing building will accommodate a portion of the required spaces needed for the expanded Daniels Faculty facility, with new construction intended to house the bulk of research and fabrication laboratories, and the extensive array of design studio spaces associated with both undergraduate and graduate studies in architecture, landscape and design.

## **Key Building Components, Systems, Standards**

### *Structural*

A structural report was prepared in 2007 by Read Jones Christoffersen:

"In general, the original 1875 building appears to be in good repair with little sign of structural distress, deflection, deterioration, or cracking visible."

Project Planning Report for the Relocation of the  
John H. Daniels Faculty of Architecture, Landscape, and Design  
February 2011

“The structural system of the original 1875 building appears to be a basic and simple system consisting of load-bearing brick masonry walls forming the exterior walls and partitions of most of the rooms, supporting floor structures of 3”x12” deep joists at 18” centres, and a wood plank sheathing floor and timber rafter roof structures.”

*Sustainable Design and Energy Conservation*

In consideration of the various forecast trends and targets for building energy efficiency, the Daniels Faculty PPC has the opportunity to elect a suitable energy use intensity to guide the design, construction and commissioning of future improvements and expansion.

Best practices for the assessment of costs and benefits associated with investments in building improvements utilize life cycle cost analysis according to the methodology set out in *ASTM E 917 Measuring Life Cycle Costs of Buildings and Building Systems*. It will be important to explicitly establish the basis for assessing cost effectiveness for all proposed improvements.

In addition to energy performance, it may also be desirable to establish targets for resources such as potable water consumption, storm water runoff, solid waste disposal, etc. In some cases, performance is specified by the exclusion of materials and practices. For example, a wide range of environmental health policies of local and national governments and international treaties have identified a high priority set of chemicals to eliminate due to their high toxicity and global impact.

Environmental performance targets ultimately reflect ecological carrying capacity and meaningful economic assessments that consider the life cycle of buildings. They also imply performance parameters that go beyond energy efficiency, and the adoption of design thinking that views buildings holistically over time as cultural resources. The origins of sustainable stewardship reside with the Project Planning Committee of the Daniels Faculty to establish future directions in the planning and design of the new facility.

*Accessibility*

1 Spadina Crescent is currently accessible from the eastern side, Russell street entry. Some of the existing, original stairs do not meet required fire ratings and/or accessibility standards. They may either be retrofitted or supplemented by complying stairs in the new addition/complex.

*Elevators*

There are four elevators in the building - two freight and two passengers. Passenger elevators are located in opposite ends of the building. All units are in need of upgrading.

*Personal Safety and Security*

The diverse nature of activities at the Faculty of Architecture, Landscape and Design requires a design for the building that ensures appropriate levels of accessibility to the building as a whole. This building will be operational throughout the week, 24 hours a day. The building design must allow its students, faculty, staff and visitors' access as required and as allowed,

safely and easily. At the same time, the design must be sensitive to the needs of those – primarily graduate students - whose activities require security after hours. A detailed security plan will need to be developed for each room, zone or floor, and factored into the design of the building to ensure functionality, accessibility and security objectives are all met simultaneously.

One Spadina Crescent is surrounded with buildings consisting of the following: The Center for Addiction and Mental Health, the Scott Mission men’s shelter, the Waverly Hotel, night clubs, a public school, UofT academic and administrative buildings and residential housing. Due to the diversity of the surrounding buildings, numerous non-community members frequent the building. Although the demolition of much of the existing structure and subsequent renovation will undoubtedly solve many of the interior way finding and light level problems, special attention to access and egress as well as outdoor lighting and safety measures must be included in order to help mitigate the perceived unsafe nature of community access.

#### *Computing and Communications*

The Faculty of Architecture, Landscape and Design is progressive in the use of computer technology and has invested considerable resources to maintain up-to-date IT services and facilities. A variety of systems and resources support a seamless student experience, the scholarly success of faculty, and effective functionality of administrative staff. The new complex will require an extensive, but highly flexible infrastructure for digital information and fabrication technologies.

#### *Deferred Maintenance Items*

A 2007 Building Envelope Evaluation recommended a number of local repairs to prevent further deterioration and leakage. These included the following:

- Replacing local cracked/spalled bricks and repointing cracked/debonded mortar joints;
- Replacing asphalt roof shingles;
- Repair eavestroughs and downspouts should be repaired to address leakage at sheet metal joints;
- Thinning or trimming ivy;
- Sealing and insulating attic floor or roof.

#### **Electrical Power**

For the level of activity noted above, the present supply capacity from the University’s distribution system should be adequate. The equipment in the sub-station is relatively new (late 1980s) so can be retained. However, if construction of additional space is anticipated, and loads increase substantially, the building could be re-fed from a manhole located on the northeast corner of Spadina Crescent and Russell Street which connects to the Toronto Hydro infrastructure installed up St. George Street.

#### **Electrical Panels**

The electrical supply to these is 120/208 volt 3 phase. All are in need of replacement due to age and lack of replacement breakers. Many with missing or incorrect directories pose serious isolation problems.

### **Emergency Power**

Emergency power for the building is provided by a 150kW diesel generator, in good condition.

Emergency lights may not be adequate under the present Code. The renovation project should cover the replacement of existing and additional emergency lights to meet current Codes.

Exit lights must be replaced and/or located according to new floor plan layouts.

### **Heating, Ventilation and Air Conditioning**

Heat for the building comes from the Central Steam Plant via a 3 inch steam line. Condensate is returned via a 1 inch line. This existing arrangement allows a maximum capacity of about 6,600 pounds per hour. Recent maximum demand has been about 2,560 pounds per hour. If loads increase substantially with increased ventilation, etc. this may not be adequate, requiring replacement of the pipes under Spadina Crescent. As well, the direct buried lines from the fence to the building (approximately 100 feet) have been in place since 1972 and may require upgrading.

The old parts of the building are heated by a perimeter system consisting of steam radiators. This type of system is virtually impossible to control with any level of accuracy and should be changed to a hydronic system, still sourcing its heat from the University's steam plant but incorporating heat exchangers to convert to hot water.

Ventilation is either non-existent or was provided for very specific purposes that will no longer be relevant after the renovations. Therefore, a completely new system will be required.

Air conditioning is currently supplied by window units, or local DX systems. A small chiller exists to supply cooling 34 rooms on the 1<sup>st</sup> and 2<sup>nd</sup> floor, west side of the main building. The animal area has a dedicated cooling/heating unit. There is no availability from other buildings for the supply of chilled water so a new chilled water plant and distribution system would have to be included in the design.

There is a small oil-fired boiler system intended to provide heat to the animal colony during periods when the main heating system is shut down. If the animals are removed from the building, this could be removed.

Controls are pneumatic and need to be replaced.

### **Plumbing**

Some washrooms have been fitted with newer electronic flushometers and faucets. Older style flush tanks for urinals add to heavy water usage. Many isolation valves throughout the building need to be replaced. Sediment separators on sinks are needed within art studios. Much of the domestic water pipes and drains in the basement level are original and in need of replacement.

### **Fire Protection**

The existing standpipe system is in good condition, and is served by a fire pump that is likewise in good condition. Siamese connections for both the sprinkler and standpipe are in good repair.

The sprinkler systems in the building are dry pipe systems, zoned vertically (basement to attic in 5 areas of the building), and are approaching 70 years of age. As such, for a major renovation, their replacement would be necessary, since vertical zoning is no longer permissible by Building Code and any sprinkler head additions or additional pipe runs to accommodate changes in assigned space would therefore not meet Code requirements nor could hydraulic calculations be carried out properly. Additionally, dry pipe systems are higher maintenance, more expensive, and are highly prone to corrosion and decay, and typical demolition work associated with renovations would likely produce a plethora of issues related to the integrity of the existing sprinkler systems due to their age. All piping, valves and sprinkler heads will require redesign and replacement.

An appropriate sized sprinkler fire pump needs to be installed to supply flow according to the design parameters of these new systems (there is no sprinkler fire pump currently, a pre-existing yet acceptable condition since no major renovations have triggered a change in the recent past).

The building fire alarm system is no longer supported by its manufacturer, and has been maintained for a number of years via stock parts removed from other buildings as their own respective obsolete systems have been replaced. A replacement of the fire alarm control unit and remote annunciator would be required to meet Code, should any new zoning be added, or should the existing zoning be changed (note: sprinkler system replacement would also trigger this). Existing conduit, wiring and devices could be re-used, with the exception of smoke detectors (there are few) and bells (which would be changed to combination horn/strobes).

Fire separations for exit stairs and interconnected floor spaces (i.e.- the central stair), as well as exiting provisions will need review and may require some specifically engineered solutions or compliance alternative proposals, subject to the approval of the Authorities Having Jurisdiction.

### **Roofing**

The roof consists of a combination of asphalt shingles and built up flat roofing. Major sections of flat and sloped roofs along with flashings and downspouts are in need of replacement. Redundant exhaust fans and HVAC units remain in place although they have not been in use for many years. There is evidence of water penetration into studio spaces from deteriorated sloped roofs. Flat roofs are covered in vegetation in several areas.

### **Exterior Envelope**

The envelope is a mixture of solid brick and stone, brick and block and wood frame construction. The general condition of the exterior cladding is good although there are many localized areas of spalling brick work. Some interior plaster damage has resulted from water migration into the building.

### **Windows**

Wood framed, double hung, single pane, gothic arched. Many are in need of repair due to water damage. Most need re-painting or carpentry repairs. Due to the lack of central HVAC

many rooms have had window sleeved air conditioners installed. This has led to further deterioration of exposed sills.

### **Foundations**

The stone foundation has evidence of water penetration in some areas.

### *Project Boundaries*

The project will be contained on its own site.

### *Hazardous Materials Disposal*

An overview of the presence of asbestos-containing materials within 1 Spadina will be provided. Detailed information can be obtained from the University's asbestos inventory system. Asbestos has been removed in recently renovated areas. All areas of the building that will be renovated within the scope of this project will require asbestos abatement. Prior to any renovation or demolition work, a pre-construction survey must be carried out.

### **Site Considerations**

One Spadina Crescent is located within the University of Toronto Area Secondary Plan, on Spadina Circle, north of College Street. It is located in a particularly prominent location within the city and the UofT campus, acting as a terminus to the view both north and south along Spadina Avenue and a minor view terminus to Russell Street and in alignment with Convocation Hall to the east.

A water easement running north-south on the east side of the site has caused some difficulty in the planning of future development on Site 7 (see Figure 2). Two transmission high-flow, high pressure water mains (900mm and 1200mm with a 2m easement on either side) run along the east side of the heritage structure and cut diagonally across the east portion of Site 7. According to Toronto Water officials, if failure of one of the water lines were to occur, it would likely be "catastrophic failure" causing major damage to the site. Because of the nature of the lines, it is unlikely that any concession to build on or close to the easement will be negotiated.

The building and surrounding landscape are much degraded and in need of significant improvements to make the spaces safe, accessible, and in line with current University standards.

As part of the University of Toronto Open Space Master plan, "Investing in the Landscape" (1997) Spadina Circle and Russell Street have together been illustrated as a demonstration site to achieve a landscape of landmark quality, a significant, distinctive, pedestrian-oriented gateway to the West Campus and an enhanced east-west pedestrian connection along Russell Street.

The Open Space Master plan identifies the Spadina Circle–Russell Street intersection as a significant gateway to the southwest part of the campus. Traffic calming measures are suggested to create better and safer conditions for pedestrians. A signaled crossing has been located between Russell Street and Spadina Circle. It is intended to extend this closure to the northern point of the circle, creating a plaza-type crossing at this quadrant.

## **Zoning**

In 1999, a Part II Plan for the University of Toronto Area was approved by City Council. This was a joint effort by the University of Toronto and the City of Toronto to identify development sites within the area of the University campus. The northern half of the circular site was designated a development site (site 7) with detailed envelope requirements (see Appendix F). The area designated for development allows for the removal of the military wing and the animal facilities and assumes a maximum height of 18m construction at the center of the site with lower flanking construction not to exceed 12m in height.

The University is currently undertaking an update to the Master Plan, which includes analysis and revisions to the development site envelopes. Responding to strategies outlined in the City's Official Plan and to development in the adjacent neighbourhoods, new zoning envelopes have been proposed for existing and new development sites, which follow planning principles identified by recent project planning committees and guidelines previously approved by University Governance.

Work to update the Master Plan, has identified the One Spadina Crescent as among the major sites that can accommodate a needed intensification of the St George Campus within its identified University Area. It may be possible to develop additional space beyond the faculty's needs for University or compatible non-University uses in fulfillment of a vision of a mixed-use bridge between the University and the City. The University and the Daniels Faculty are committed to developing the One Spadina Crescent in a manner that respects the prominent nature of this unique site, and in a way that sets a standard for, and augers a new future for the western half of the St. George Campus.

## **Resource Implications**

### **Secondary Effects**

Existing occupants include units from the Faculty of Arts and Science, the Faculty of Medicine, Facilities and Services, Ancillary Services and other student and central administrative groups. Within the available 4813 net assignable square meters of space (nasm), approximately 2350nasm of space is occupied currently by groups, other than the Visual Studies program, that must be relocated in order to allow the Daniels Faculty to occupy the renewed building.

In addition to spaces occupied within the existing building, a significant amount of exterior grounds are occupied by units and will require re-accommodation elsewhere. 800sm of exterior space is used by Waste Management/Recycling in an open yard holding garbage containers and recycling containers for scrap wood, metal, and asbestos and other recyclables.

Grounds Services occupies approximately 500sm of exterior space in an open yard area containing storage bins for salt, top soil, bark mulch and many miscellaneous materials required for infrastructure repair including bollards, bricks, etc. In addition, a covered shed (90sm) is located in this area accommodating small vehicles and equipment and two diesel gas tanks (20sm) are located on site. In total 1410sm of exterior space is currently allocated in this location. Additionally, 128 parking spaces are currently located on the site, and will

Project Planning Report for the Relocation of the  
John H. Daniels Faculty of Architecture, Landscape, and Design  
February 2011

require relocation within the St. George campus boundaries to satisfy the University of Toronto Area parking by-law.

A separate plan has been prepared, identifying the current occupants who must be relocated, and will be included in the final report.

**Schedule**

Pending Governance approval, project planning and design of for the Daniels Faculty and other uses of the One Spadina site will commence in the Spring of 2011. It is anticipated that given the complex nature of the project and the site, the need for rezoning, heritage, and design reviews and approval processes, that planning, design and approvals could take up to two years. Pending these approvals, and funding, construction would most likely take a minimum of two additional years.

**Funding**

To meet its projected core program and curricular commitments, the Daniels Faculty will need to build a minimum of 3227 nasm, 5647gsm. The total project costs to create this amount of space will depend on the nature of the building design, the costs associated with various site improvements and other secondary costs. All aspects of the total project cost will be determined in detail and included in the final Project Planning report.

Funds raised and/or committed to date are \$17.5 million. A funding plan for the project will be identified in the final report, including nasm allocations associated with proposed pragmatic changes and strategic alignment with Visual Studies.

**Recommendations**

THAT the Planning and Budget Committee recommend to the Academic Board:

THAT the plans for relocation of the Daniels Faculty of Architecture, Landscape and Design to new facilities as outlined within the Interim Project Planning Report be approved in principle with implementation subject to approval of a detailed final project planning report.