Deferred maintenance

2025 report

UNIVERSITY OF TORONTO | Facilities & Services

Message from the COO

Every year, as our team prepares this report, I pause to reflect on the role our buildings play in the lives of our community. Our campus spaces shape lifelong memories, inspire discoveries and influence the well-being of tens of thousands of people.

As stewards of this campus, we take our responsibility very seriously. We work hard to keep our spaces safe, clean, comfortable and ready to support all varieties of learning, research, work and daily campus life. But no matter how meticulously we maintain our building systems, they will age and they will deteriorate.

Behind our walls, many of the electrical, mechanical, plumbing and other systems that keep our campus running — the systems that excite me as an engineer but that most of our students and faculty will never see — are aging. They need a dedicated, steady stream of investment for renewals, upgrades and replacement, especially as they face the added stress of unpredictable, intense weather events.

I am incredibly pleased that we launched a historic $300 million investment into our deferred maintenance, or as I call it, deferred renewal, to do more to protect our iconic buildings and upgrade critical systems, all while taking every opportunity to maximize climate resiliency and energy efficiency. The RISE program (Revitalizing Infrastructure, Strengthening Excellence), comprised of more than 300 renewal projects, will mitigate real infrastructure risk and alleviate our backlog in the immediate future.

As we near our 200th birthday as Canada's foremost university, I am hopeful for a sustainable, long-term funding strategy to continue to preserve, enhance and future-proof our campus for the 100,000 people who learn, teach and work here every day.

Sincerely,

Ron Saporta
Chief Operating Officer
Property Services & Sustainability

Facilities & Services team members in the geoexchange control room under Front Campus (photo by Nicole Njagi)

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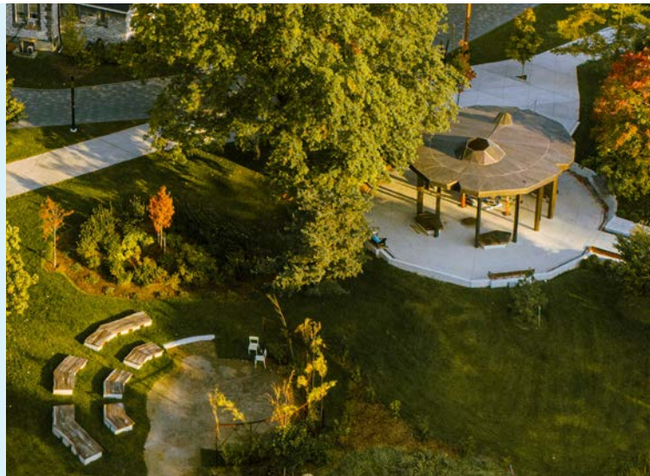
Acknowledgement of traditional land

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

Ziibiing Indigenous Landscape (photo by David Lee)



Deferred maintenance at U of T

Deferred maintenance defined

Despite its name, deferred maintenance (DM) does not refer to the routine, preventative upkeep of buildings. Better thought of as deferred renewal, it describes the major infrastructure, repairs and upgrades that have been delayed due to budget or resource constraints.

DM requires sustained long-term investment to preserve, enhance and future-proof our historic campus buildings in support of the university's academic mission — enabling pioneering research, world-class teaching, attracting top talent and protecting the health and safety of all campus users.

When renewal does not keep pace with aging and deteriorating infrastructure, a backlog occurs.

Managing this backlog and prioritizing DM needs is critical to preventing minor issues from escalating into major system failures, which increase operating costs and negatively impact the campus community.

← *Convocation Hall (photo by Lisa Lightbourn)*

Medical Sciences Building (photo by Matthew Volpe)

F&S teammates discuss roof repairs (photo by Donglin Que)

The deferred maintenance process

How do we prioritize deferred maintenance needs?

Managing DM is critical to prevent minor issues escalating into major system failures. As stewards of the historic St. George campus, Facilities & Services uses an evidence-based, multi-factor model to identify the projects that are most critical for the campus community.

Our campus

Buildings: 167
Square footage: 14.4 million sq. ft.
Average building age: 97 years

Deferred maintenance includes strategic projects like roof replacements and HVAC upgrades.

F&S teammate Jeff adjusting mechanical controls (photo by Donglin Que)

Audit

Every five years, each building on campus is audited to assess its age, condition and design compliance, informing planning of and budgeting for future upgrades.

Audit results, property acquisitions, usage changes and planned updates are logged in a centralized, inflation-adjusted database, providing a complete view of campus infrastructure needs in the coming years.

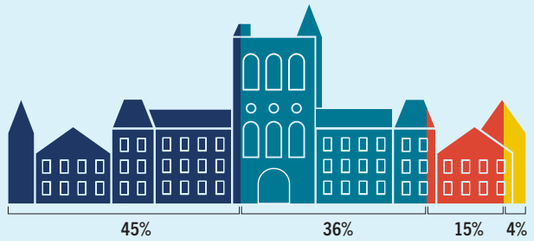
Assess

To prioritize DM projects as fairly as possible given the resources available, F&S uses an evidence-based multi-factor model.

Every building element is given a score out of five, based on four weighted categories. The greater the risk or impact of an issue on campus users and infrastructure, the higher the score.

The highest scoring issues are prioritized for the following year. Criteria weightings are periodically reviewed by key stakeholders.

Prioritization criteria & weighting



- **Physical condition** measures the relative age and health of building elements (prioritizing elements in critical condition).
- **Fabric impacts** of failure measures the impact a failure would have on the rest of the building (prioritizing issues with the potential to cause widespread damage).
- **Impact on users** measures the extent a failure would have on occupants and users of the building (prioritizing widespread over localized disruption).
- **Building use** measures the impact on the university's core mission (prioritizing academic and research functions).

Act

Work gets underway on the highest priority projects to preserve, enhance and future-proof our campus.

This five-year audit, assess, act cycle is continually underway.

Tri-campus summary: 2025

$7.4B

The total current replacement value of all university buildings has increased by $280M since 2024.

$1.5B

The tri-campus deferred maintenance backlog has increased by $46.4M since 2024.

20.2%

The combined facility condition index has decreased by 0.14% since 2024.

St. George campus (photo by Matthew Volpe)

Deferred maintenance by campus

	Definition	St. George	Mississauga	Scarborough
Total current replacement value	The cost to replace all academic and administrative buildings on campus	$5.80B for 121 buildings ▲ $237M	$981M for 28 buildings ▲ $25M	$657M for 12 buildings ▲ $18M
Deferred maintenance backlog	The cost of major repairs and upgrades needed to fix a building's deficiencies	$1.30B ▲ $56M	$69.0M ▼ $4.2M	$135.9M ▼ $5.70M
Facility condition index	Total deferred maintenance backlog / total current replacement value	22.4% ▲ 0.06%	7.03% ▼ 0.62%	20.7% ▼ 1.48%
Priority-one needs	The cost of deficiencies that are recommended to be addressed within the next year	$482M ▲ 14.9%	$4.31M ▼ 28.9%	$46.0M ▼ 3.60%

F&S teammate Peter in electrical substation (photo by Donglin Que)

Factors affecting deferred maintenance

Economic pressures

Global trade disruptions, high interest rates and persistent inflation have increased the cost of materials and skilled labour required for capital renewal. Meanwhile, Ontario's non-residential construction inflation continues to climb, rising 4.2 per cent over the past year, adding to the exceptional increases recorded during the COVID-19 pandemic. This increases pressure on our DM budgets.

Climate change

Weather fluctuations and extreme weather events, including intense rainfall and flooding, place additional stress on aging systems and increase the likelihood of failures. These pressures are expected to increase infrastructure maintenance costs by two-thirds (Financial Accountability Office of Ontario, 2023), while emergency repairs divert funds from planned maintenance. This will increase pressure on both our operating budgets and accelerate DM needs. Prioritizing proactive DM investments helps strengthen resilience, reduce long-term risk and support the campus' broader climate-positive goals.

Aging infrastructure

As buildings age, their DM needs naturally grow. Older buildings carry inherent risks, including hidden structural vulnerabilities and operational inefficiencies. While F&S audits facilities regularly to identify emerging issues, delays in funding high-priority DM needs increase the likelihood of costly emergency repairs. Prioritizing the highest risk areas for DM helps ensure safety, reliability and long-term performance.

As we approach U of T's bicentennial year, we are also nearing critical renewal periods for buildings constructed during major construction booms in the 1960s and 2000s.

Fall on campus (photo by Donglin Que) →

University College (photo by Diana Tyszko)

RISE Revitalizing Infrastructure, Strengthening Excellence

Deferred maintenance 2017-2018

RISE: A historic $300M investment

The RISE program (Revitalizing Infrastructure, Strengthening Excellence) is a historic investment to greatly reduce institutional infrastructure risk over three years.

Through RISE, we are funding and executing many deferred maintenance projects in a condensed timeframe to slow the growth of the DM backlog in the short- to medium-term.

Using an evidence-based, multi-factor model to prioritize RISE renewal projects helps us prevent the most likely, costly and disruptive infrastructure failures.

RISE is also moving us closer to becoming a climate positive campus by improving the resiliency and energy efficiency of our buildings.

Energy specialists assess each RISE project to find opportunities to maximize energy savings and decarbonization, or lay the groundwork for future decarbonization within the building.

Funding distribution by project focus

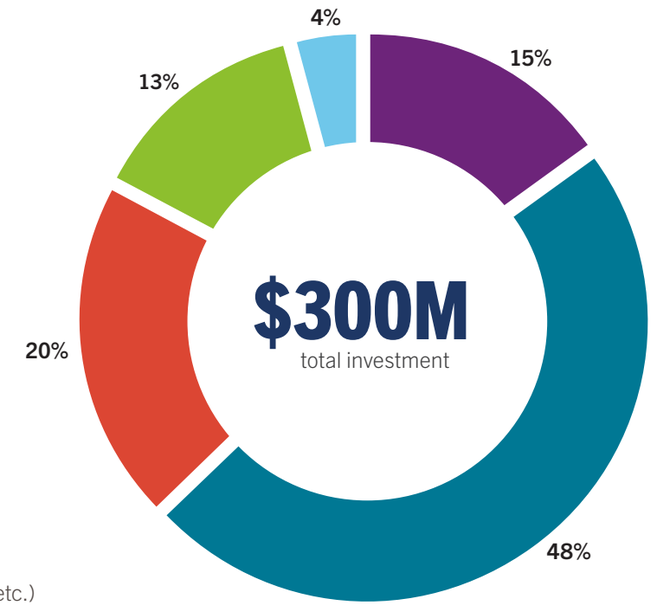
$145M
Mechanical
(HVAC, fire protection)

$59M
Electrical
(switchboards, panels, transformers)

$39M
Elevators
(modernize or replace 47 elevators)

$13M
Roofing
(repair or replace 24 roofs)

$44M
Other costs
(permits, project management, interest, etc.)



Program timeline

Launch: May 2025

Completion: April 2028

Design: Underway on approximately 69% of projects

Procurement: Underway, target completion January 2027

Construction: Underway, target completion April 2028

Key stats

3
years

$300M
investment

300+
projects

68
buildings

Convocation Hall (photo by Donglin Que) →

Spotlight:
An investment in elevators

Elevators are among the most critical building systems on campus. They enable accessibility and the daily movement of tens of thousands of students, faculty and staff.

St. George campus elevators

The St. George campus is home to more than 320 elevating devices, one of the largest university portfolios in Canada.

Typically, elevators require full modernization every 25 to 30 years. On campus, 76 elevators are more than 30 years old.

47+
elevator modernizations

Program overview

The RISE program will modernize or replace more than 47 elevators. Modernization upgrades will include new controllers, motors and doors, as well as safety circuits, cab improvements and updated communication systems.

Total investment:
$39 million

Timeline:
2025–2028

Impact:

- **Reliability:** Aging controllers, relays and door equipment account for more than 70 per cent of elevator shutdowns. Upgrades prioritize these areas to reduce disruptions experienced by students, faculty and staff.
- **Accessibility:** Many academic and research buildings are not fully accessible without elevators. Reducing outages is essential to ensure access to classes, labs and services.
- **Ease of ongoing maintenance:** Many older units contain obsolete parts no longer supported by manufacturers. Upgrades prioritize serviceability and reduced downtime.
- **Energy use:** Modernizations can reduce energy use by 40–75 per cent.

Busy elevators in the Health Sciences Building (photo by Donglin Que) →

Spotlight: Preserving iconic buildings

Roof and drainage systems are essential to protecting our historic buildings. When they fail, water can infiltrate walls, damage interiors, disrupt academic and ceremonial spaces and accelerate deterioration. For iconic campus buildings, safeguarding building envelopes is critical to preserving architectural character and preventing small leaks from becoming costly structural issues.

An investment in roofing

Total investment:
$13 million

Impact:
As part of RISE, Facilities & Services will be repairing or replacing 24 roofs across 10 buildings on the St. George campus, including those of iconic buildings such as Soldier's Tower and Knox College.

Jackman Humanities Building roof renovation

Timeline:
Underway, completing in early 2026.

Condition:
The roofing membrane and drainage have surpassed their useful life, with active water intrusion into student areas and an active dentistry practice.

Work underway:

- Complete roof replacement, with added insulation to improve energy efficiency.
- Masonry repairs to address leak intrusion points.
- Restoration of flashing to direct water away from roof joints and other vulnerable areas.
- Complete drainage replacement.

Impact:

- **Resolve structural issues:** Eliminate leaks, protect key interior spaces and prevent future infrastructure damage.
- **Maintain building functionality:** Ensure a safe and comfortable environment for occupants.
- **Energy efficiency:** Improved insulation and energy savings.
- **Longevity:** Extend the total roof lifespan and restore the building to a proactive, preventative maintenance cycle.

Jackman Humanities Building (photo by Johnny Guatto)

Soldier's Tower (photo by Polina Teif)

Spotlight:
Driving sustainability through renewal

Addressing deferred maintenance isn't just about replacing aging assets; it is a powerful lever for sustainability. We are seizing the opportunity to renew infrastructure with lower emissions and higher efficiency systems — which in turn lowers campus energy costs. When capital renewal is applied strategically, we can align maintenance priorities with long-term climate and fiscal goals.

RISE: Renewal with sustainability at its core

Each RISE project is assessed for opportunities to maximize decarbonization or lay the groundwork for future decarbonization initiatives. This includes switching from gas to electric boilers, installing heat recovery systems to capture and reuse waste heat, optimizing building control systems to automatically adjust ventilation during periods of low demand and much more.

A new electric boiler being lifted into the Central Steam Plant (photo by Johnny Guatto)

Ramsay Wright Laboratories (photo by Diana Tyszko)

Deep energy retrofits at Ramsay Wright Laboratories

Timeline:
2026–2029

Opportunity:
Ramsay Wright Laboratories is one of the most energy intensive buildings on campus with many DM needs. This overlap creates significant energy-saving opportunities.

Work planned:

- Partial electrification of heating.
- Installation of heat pumps and recovery of waste heat.
- Installation of solar panels to offset electricity demand.
- Upgraded fans and fume hoods to increase energy efficiency.

Impact:

- Reducing future building energy use by up to 40 per cent.
- Cutting greenhouse gas emissions by 80 per cent in combination with other sustainability initiatives.

Canada's largest urban geoexchange (photo by Donglin Que) →

Smart investments, stronger campus

Facilities & Services is steadily reducing the university's infrastructure risk by targeting available deferred maintenance funds to the assets and systems that pose the greatest risk to campus operations. By investing where it will have the greatest impact, we reduce the likelihood of system failures and protect building performance.

Using our multi-factor assessment model, each component receives a risk score, giving us a consistent and transparent way to determine where investment is most urgently needed. Developed in 2019, this model incorporates feedback from academic leaders to ensure the prioritization structure aligns with the evolving needs of our institution.

Using this model, Facilities & Services reduced the weighted risk index in eight of 10 core DM categories between 2019 and 2024. In 2025, we see further reductions in risk thanks to the RISE investment.

Weighted risk index

1
Low risk of failure and low potential impact on building users

5
High risk of failure and high potential impact on building users

Weighted risk index with and without RISE investment

St. George DM areas	2025 without RISE	2025 with RISE
Elevators and lifts	4.62	4.21 ▼
Roofing	3.94	3.81 ▼
HVAC	3.52	3.41 ▼
Fire protection	2.74	2.68 ▼
Electrical	3.71	3.66 ▼
Superstructure	2.64	2.63 ▼
Plumbing	3.05	3.04 ▼
Exterior enclosures	3.08	3.08 –
Foundations	2.86	2.86 –
Site improvements	2.47	2.47 –

Front Campus (photo by Matthew Volpe) →

Front Campus (photo by Donglin Que)

A sustainable future for deferred maintenance

Benchmarking our need and investment

On our historic campus, where over half of the buildings were constructed before 1950, deferred maintenance needs can be substantially higher than in newer facilities.

Across Ontario, higher education institutions require an average of $790 per m^2 for DM. On the St. George campus, our need is $994 per m^2, reflecting both the age of our infrastructure and previous investment levels.

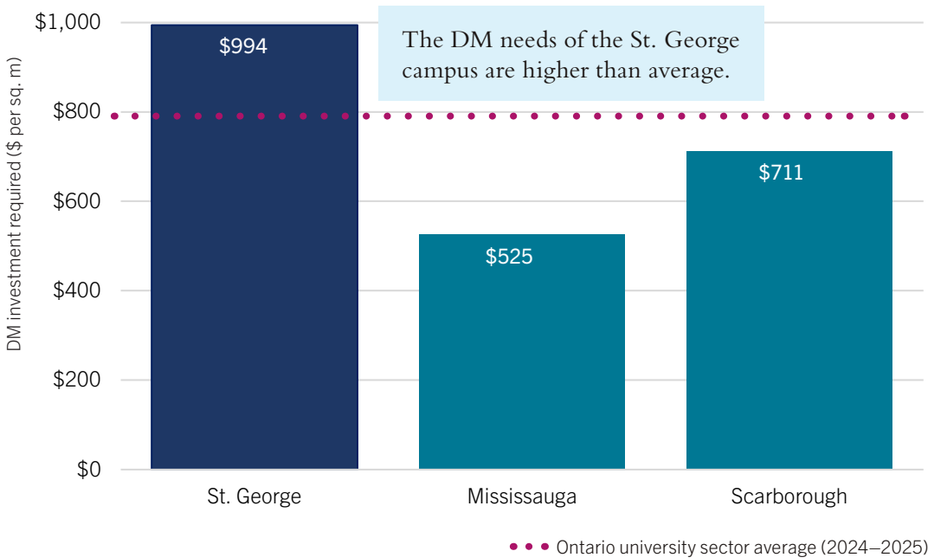
Experts recommend allocating 1.5–3 per cent of the total current replacement value of all buildings annually to infrastructure renewal to ensure long-term sustainability and functionality.

The 2024 provincial average is approximately 1.49 per cent of current replacement value. At U of T, the tri-campus spend in 2024–2025 was 0.71 per cent.

To manage our DM backlog long-term and preserve our historic campus for the future, ensuring ongoing investment reflective of tri-campus DM need will be critical.

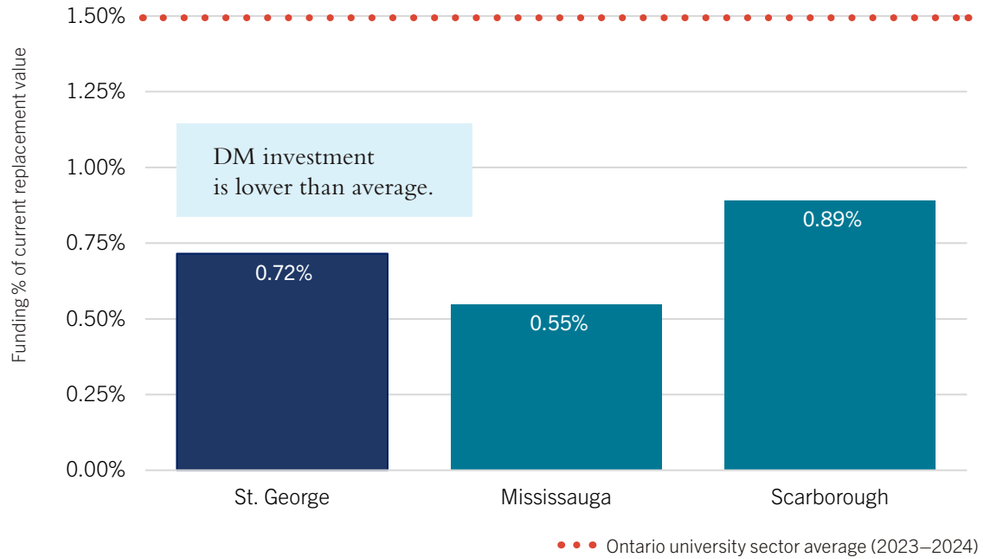
Deferred maintenance needs by campus

($ per sq. metre)



Deferred maintenance investment by campus

(% of current replacement value)



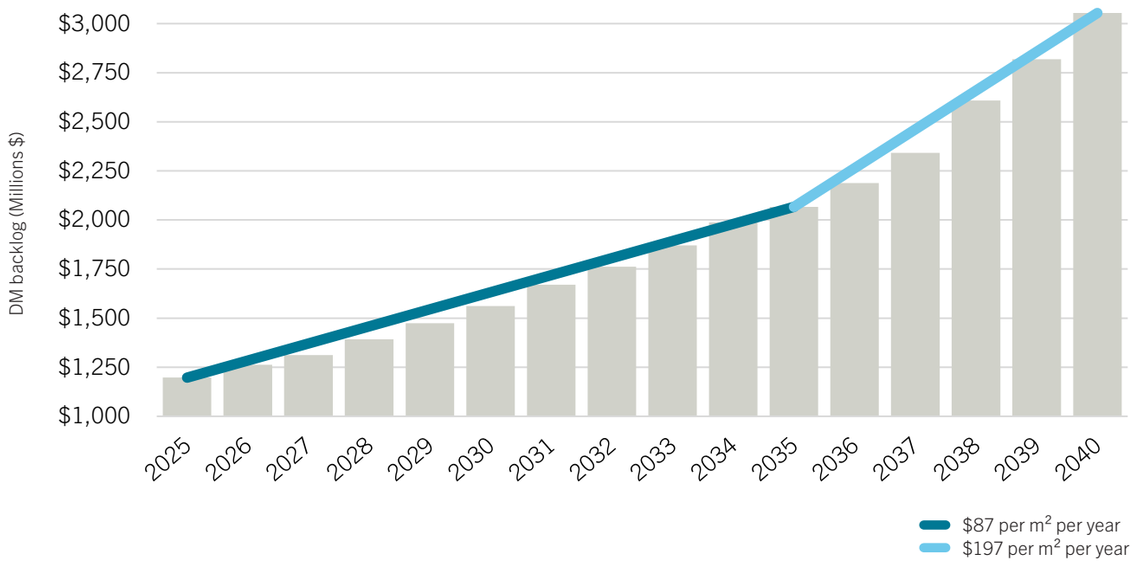
Looking ahead

The RISE investment has significantly reduced near-term deferred maintenance growth. Over the next five to 10 years, this targeted infusion of funding will stabilize many high-priority assets, extend the life of critical systems and meaningfully slow the accumulation of deferred maintenance.

Beyond 2035, DM growth will accelerate as the natural rate of infrastructure deterioration, combined with approaching critical renewal periods for university buildings built during major construction booms in the 1960s and 2000s, will outpace our baseline (pre-RISE) levels of investment.

While the RISE program reduces our DM risk in the near-term, sustained investment will be essential as we work to preserve, enhance and future-proof our campus for our third century and beyond.

St. George campus deferred maintenance growth



Co-benefits of capital projects

New construction and major renewal projects play a critical role in reducing the deferred maintenance backlog.

By replacing aging systems and building components that are at — or beyond — their useful life, capital projects slash infrastructure risk and improve building performance and energy efficiency.

Our capital investments in 2025 are projected to reduce our DM backlog by approximately $54M. Notably, the new James and Louise Temerty Building will replace the west wing of the 1960's Medical Sciences Building with an 11-storey, 366,000 sq. ft. facility housing modern spaces for AI research, precision medicine and collaborative education. This project will address approximately $20M of DM.

Similarly, the second phase of the Schwartz Reisman Innovation Campus, including demolition of the 1930's Banting Institute and construction of a 20-storey, 400,000 sq. ft. tower, has addressed approximately $10M of DM.

Image courtesy of Schwartz Reisman Institute for Technology and Society

All photos provided by the University of Toronto unless otherwise stated.

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King's College Circle (photo by Donglin Que)

Available online at fs.utoronto.ca

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