

UNIVERSITY OF TORONTO SCARBOROUGH CAMPUS MASTER PLAN

APRIL 2011



Tomorrow is Created Here



UNIVERSITY OF
TORONTO
SCARBOROUGH



A message from the Principal

The University of Toronto Scarborough (UTSC) is growing as a major centre for learning, discovery and engagement. Our campus is an integral component of Canada's leading research-intensive university, a place where researchers are working to contribute to cutting-edge knowledge, and a place where the finest students are taught by the finest professors. The campus is also evolving with its own distinctive character, shaped by the innovative programs we teach and the culture of global engagement that we foster.

Over the past decade, UTSC has experienced dramatic growth. In this short time, enrolment has doubled and many new buildings have been constructed, changing the face of the University significantly. Throughout this period, our expansion has been guided by the strong foundations of our original campus design, and a commitment to high-quality architecture, natural open spaces, and a student-centred experience of the built environment.

With these principles guiding our future physical expansion, we are now looking ahead to a new phase of growth and change. As the campus evolves, we also must address the need for more specialized space for research and teaching, the integration of graduate training, world-class athletic facilities, and major transit investments in our area. These, and other influences, will see our campus become dramatically different from what it is today.

This master plan reflects a vision of how the physical campus will evolve over the next 50 years or more. Its priorities are to support a world-class academic experience and to integrate seamlessly with the urban fabric of the City of Toronto. The master plan looks beyond incremental growth and takes a major leap ahead; and, it considers broad patterns of development, such as street systems and open space networks. By establishing our goals for what the full scale of the campus should look like well into the future, we've created a framework that provides for flexibility while guiding our decisions now and over the long term. This ensures that, with each new opportunity, we build wisely, cohesively and in the context of a broader plan.

The vision for our campus expansion was formed through broad consultation with our many colleagues and friends, from business and government, to faculty, students and alumni. Together we have shaped a framework that will guide the physical growth of UTSC. Yet, this master plan is more than a development framework; it is a blue print to give life to a vibrant university community that will thrive for many years to come, one that is abuzz with the excitement of discovery, engaging discourse and dynamic experiences – where students prepare for the best possible future; where scholars contribute to a better world.

Sincerely,



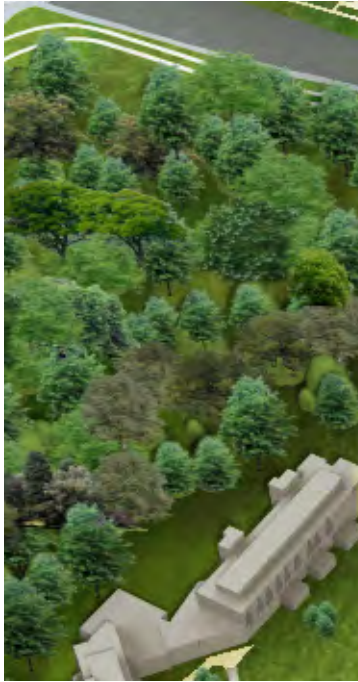
Dr. Franco J. Vaccarino
Principal, University of Toronto Scarborough
Vice- President, University of Toronto



UNIVERSITY OF
TORONTO
SCARBOROUGH

Table of Contents

1. INTRODUCTION & CONTEXT



2. VISION FOR THE CAMPUS



3. THE MASTER PLAN



4. PLANNING RECOMMENDATIONS



5. IMPLEMENTATION



1. INTRODUCTION & CONTEXT	1		
2. VISION FOR THE CAMPUS	9		
2.1 The Strategic Plan	10		
2.2 The Campus Vision	11		
2.3 Master Plan Key Drivers	15		
3. THE MASTER PLAN	19		
3.1 Building the New Campus	27		
3.1.1 Ensuring Cohesive Academic Development	28		
3.1.2 Building the Campus Core	30		
3.1.3 Providing Diverse Housing Options	32		
3.1.4 Supporting Athletic Opportunities	34		
3.1.5 Engaging in Partnership Development	36		
3.1.6 Supporting Re-use of the City Lands	38		
3.2 Enhancing the Open Space Network	41		
3.2.1 Extending the Pattern of Landscape and Wayfinding	42		
3.2.2 Major Landscape Initiatives	44		
3.2.3 Enhancing and Reconnecting the Ravine	54		
3.2.4 Protecting Natural Heritage	58		
3.3 Ensuring Mobility	61		
3.3.1 The Street Network	64		
3.3.2 Transit Systems	66		
3.3.3 The Pedestrian Network	68		
3.3.4 The Bicycle Network	70		
3.3.5 Parking, Servicing and Pick-up/Drop-off	72		
3.3.6 Universal Accessibility	74		
3.4 Achieving Sustainable Systems	77		
3.4.1 Infrastructure and Utilities	78		
3.4.2 Water and Stormwater Management	79		
3.4.3 Climate Change	80		
4. PLANNING RECOMMENDATIONS	83		
5. IMPLEMENTATION	107		
5.1 Development Phasing & Integration	108		
5.2 Building Design Guidelines	112		
5.3 Municipal Approvals	114		





1. INTRODUCTION & CONTEXT

The University of Toronto Scarborough (UTSC) is at a new threshold. Substantial growth in the campus population and the built environment over the past decade has transformed UTSC from an undergraduate satellite campus of University of Toronto to a mid-sized university with a comprehensive academic program. Plans to expand into new fields of teaching, research and graduate education will further UTSC as a dynamic centre for learning and discovery in the coming decades.

In 2008, UTSC determined it needed a new vision and master plan to guide the future expansion of its physical campus. Developed through extensive consultation, the vision provides direction for the evolution of the campus and its relationship to the surrounding community and region. This master plan is the fulfillment of the campus vision, providing a comprehensive framework to guide UTSC as it reaches its full potential. The framework continues past traditions, where ideas of innovation and excellence informed the built environment, and it establishes a new direction, where a hub of mixed-use facilities promotes openness and integration and creates a vibrant centre for learning and community

Tomorrow is created here

UTSC was founded in 1964 at a time when bold new ideas in education were being tested. The campus was to reflect the high standards of academic achievement for which University of Toronto (UofT) was world renowned and to be a place for innovation and experimentation.

The UTSC campus continues these traditions today and is known as a centre for cutting-edge research, new forms of pedagogy, and distinctive academic programs. With experiential learning one of its cornerstones, UTSC helps students prepare for their future through experiences complementary to the academic curriculum, from work placements, internships, lab positions, to volunteerism in the community, and more. Core programs like the Bachelor of Business Administration, Biology and Political Science, stand alongside unique programs such as International Development Studies, Global Asia Studies, City Studies, an MSc, and now a PhD (the first tri-campus PhD offered at UTSC), in Environmental Science

UTSC's research enterprise is of exceptional breadth and depth, emphasizing strong disciplinary foundations, as well as dynamic interdisciplinary collaborations. Researchers and scholars focus on relevant work that aims to contribute in meaningful ways to the future of human kind, from our global society and economy to the health of our planet and people.

The learning environment at UTSC encourages connections within and between disciplines and cultures, among students, between undergraduates and faculty members and across the organization. The value we place on interaction stems from our roots as a small, close-knit campus.



The campus supports a rapidly growing population



Figure 1.1: The UTSC campus today

Legend

- AA** Arts & Administration Building
- AC** Academic Resource Centre
- BV** Bladen Wing
- HW** Humanities Wing
- JF** Joan Foley Hall
- NW** North Residences
- MW** Management Wing
- RC** Athletics Centre
- SL** Student Centre
- SY** Science Research Building
- SW** Science Wing
- SR** South Residences
- IS** Instructional Centre

UTSC: a growing pillar in the University of Toronto tri-campus system

With a student population of over 10,000, UTSC is a mid-sized university. With this scale of a campus community and its own distinctive campus experience, UTSC has emerged as a significant partner in the University of Toronto tri-campus system.

Over the most recent decade, a major building boom began to address major space deficiencies at UTSC. More buildings are currently being planned or are under construction. Unlike many other campuses, UTSC has a large land base that will continue to meet the university's development needs well into the future.

From a campus planning perspective, UTSC has significant capacity for growth. As undergraduate and graduate demand continues to grow in southern Ontario, UTSC is strategically positioned to accommodate significant new growth and enrolment within the framework of this master plan. Given this advantage, UTSC will serve as a major player in the development of new or enhanced tri-campus academic programs and facilities.

CAMPUS POPULATION (2010/2011)

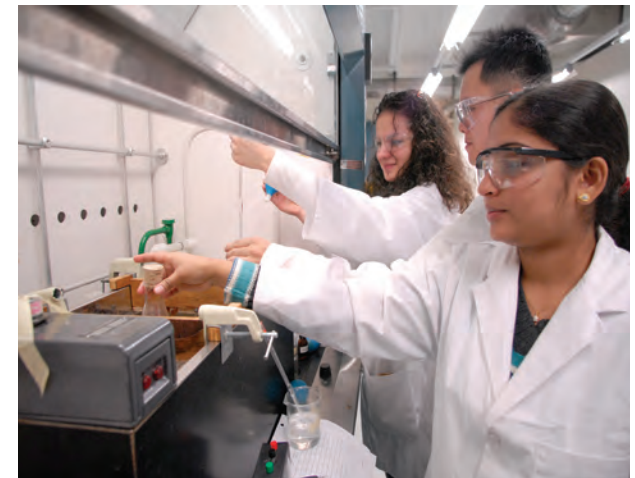
Student Headcount	10,426
Supervised Graduate Students	403
Academic Staff (Faculty and Library)	296
Administrative Staff	404

PHYSICAL FACTS

Total Campus Area (hectares)	123
North Campus Area (hectares)	40.8
South Campus Area, excluding the Ravine (hectares)	20
Ravine Area (hectares)	65
Gross Floor Area (m ²)	131,300
Student Residences	760
Parking Spaces	2,691



Undergraduate teaching is a core part of UTSC's mission



Graduate research continues to grow in importance

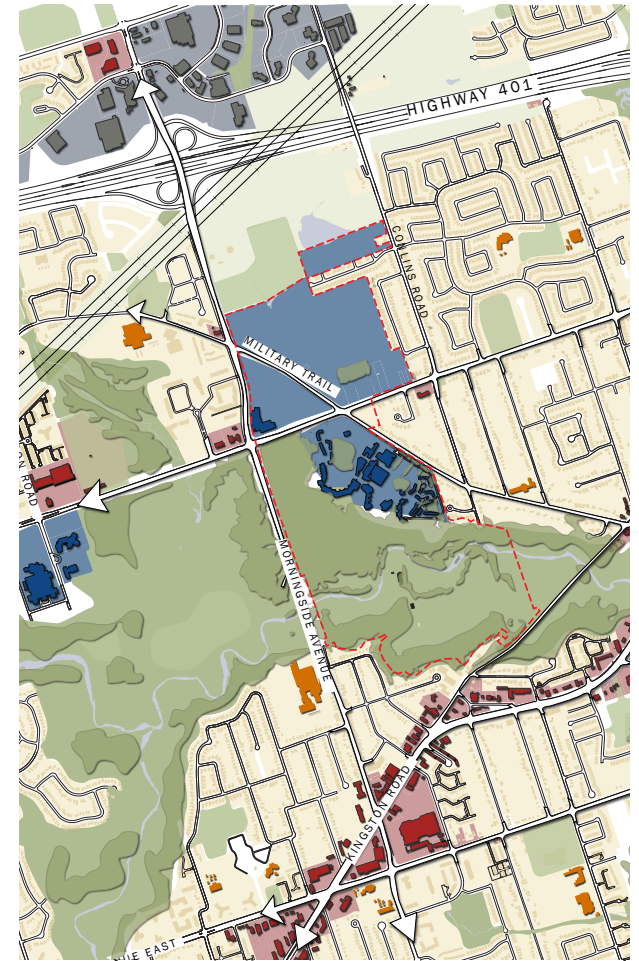
UTSC: a new hub for regional vitality

UTSC was founded on the agricultural lands of Miller Lash's summer estate, and was built overlooking lush parkland. While the university takes pride in its inspirational setting, it is somewhat isolated from the surrounding urban fabric. While the city has grown up around the university, the campus has virtually remained a 'hidden gem'.

The university's historically small size contributed to its limited connections. Prior to this past decade, UTSC's enrolment never rose above 5,000 undergraduate students. The extensive and undeveloped campus lands and the barrier characteristics of the ravine created a buffer from the surrounding community.

Today the extended environment around the university is unmindful of the university and its population. There are few restaurants, retail and service uses to serve the needs of a large campus population, and academic and programmatic connections to the surrounding community have been limited.

The physical campus itself now provides UTSC with an opportunity to re-engage with the surrounding community to create an active urban place and become visible as a regional centre. Rapid enrolment growth and campus development that has occurred in recent times will continue in the coming decades, bringing many new people and activities to the campus. Where there once was a gap between the university and the city, the master plan will extend the city into the campus, and vice versa, through new campus development, transportation investment and open space enhancements.



While UTSC is relatively isolated from the surrounding community resources, new university growth will see the surrounding city extend into the campus environment.

UTSC: the university for the eastern GTA and beyond



The recently constructed Management Building

Originally built at the edge of suburban Scarborough, the campus is now situated near the centre of the rapidly growing Greater Toronto Area. Urban development has extended far beyond the campus into Markham, Richmond Hill, Durham Region and other surrounding areas. The expansion of the GTA brings new and growing populations that continue to generate increased university enrolment. UTSC is uniquely positioned to absorb much of this growth.

Much like York University's rapid growth to absorb new enrolment in the western and northern GTA's suburban communities, UTSC will play a significant role in absorbing enrolment growth in the eastern GTA. Given its breadth of programming and its position as the largest university in the eastern GTA, UTSC is poised to serve as the comprehensive university of choice for a growing student population.

In concert with regional growth, a new wave of development is now reaching Scarborough in the form of intensification and redevelopment. With this new wave of development come new opportunities for UTSC's physical growth and regional connectivity. UTSC's undeveloped lands are unprecedented in the City of Toronto, and have the potential to absorb all of the university's growth needs while accommodating other types of complementary development.

Mirroring the region's growth and intensification, recent shifts in transportation funding will bring new transit infrastructure investments to the GTA. Located along three potential rapid transit routes, UTSC is strategically positioned to benefit from this investment. These investments will not only increase the university's regional connectivity, but will enhance the profile of the campus lands and offer opportunities for new uses and complementary development.



UTSC stands alone as the comprehensive university for the eastern GTA, with the capacity to accommodate the region's growing enrolment demand.

The future will bring even greater change to the UTSC campus

UTSC is now embarking on a path that will further the university's contribution to post-secondary education and research in the 21st century. Critical to the university's success is a physical campus that addresses current space needs and grows with the university, keeping pace with student demand and fostering excellence in the university community.

Significant enrolment growth is expected in the coming decades, with the potential to surpass the recent growth in the past decade that doubled the campus population. Campus development projects continue to move forward, as new facilities are brought online to meet current capacity needs and to serve the growing population of the future. Despite recent investments, new facilities are still required to meet the needs of UTSC's current enrolment.

This master plan provides direction to transform UTSC's campus. It builds on past planning initiatives, including UTSC's previous master plan from 2001. The previous plan guided the past decade of numerous South Campus infill projects and identified the first buildings of the Campus Core.

This master plan provides a framework for growth that not only supports the academic mission, but creates a structure in which the university and city can thrive in an integrated, campus-like setting. Not only will UTSC grow as a major institution, but the city will with it, fueled by the academic, creative and industrious spirit that is a hallmark of all great universities.



The 2001 master plan guided UTSC's recent building boom and projected the development of the Campus Core





2. VISION FOR THE CAMPUS

UTSC is at a critical juncture: planned growth will dramatically increase the campus population and building footprint; the new Instructional Centre has established the university's presence on the North Campus; planned transit investments have the potential to create truly regional connectivity; and the campus has been chosen as the home of the aquatic facility for the 2015 Pan Am Games.

Embedded in the university's Strategic Plan for academic development, the Campus Vision contains a series of directions that served as the guiding principles for the campus master plan. Many of the major initiatives, emerging areas of growth and city-building investments facing UTSC at this critical juncture were identified and organized as a series of key master plan drivers. Together with the Campus Vision, these Key Drivers provided a physical framework to guide the evolution of the master plan.

UTSC's Strategic Plan provided the academic foundation for the master plan

Currently in a period of major transition, the population and footprint of UTSC continues to grow at a rapid pace. In the context of change, UTSC's Strategic Plan provides the framework for academic advancement and the evolution of the university's academic mission.

The primary focus of a campus master plan is to support the academic mission of a university. Accordingly, this master plan builds on the academic directions identified in UTSC's Strategic Plan, including the following five growth areas:

1. New and emerging areas of scholarship at the undergraduate level

UTSC will continue its tradition of nimble and responsive academic pursuit by supporting the emergence of new areas of scholarship that build on traditional, well-established fields of study.

2. Enhanced graduate training

UTSC will grow its graduate programs to more than 10% of the total student population and will ensure that the campus is the principal home for faculty and research facilities.

3. Internationalism

Building on the university's diverse student body and academic areas of strength, UTSC will strengthen its focus on academic programs that have international relevance and impact.

4. Experiential learning

UTSC will ensure broad intellectual preparation by expanding its co-op education programs to offer curricular, co-curricular and extra-curricular opportunities for its students.

5. Sustainable university platform

UTSC will ensure that a full spectrum of top-quality resources support the academic mission, including excellent faculty, facilities and programs.



UTSC's nationally-recognized environmental science program



New teaching facilities will support the academic mission

Enrolment and space projections provided a basis for understanding growth expectations

Projecting growth is not an exact science. Changing priorities, shifts in government policy and new funding opportunities, among other things, can impact where and how a university grows. However, UTSC is committed to expanding its student population over the coming decades. The university is also committed to increasing academic floor space to meet the needs of its existing and future population.

Significant enrolment growth is expected in the coming decades, with the potential to surpass the recent growth in the past decade that doubled the campus population. By 2030, it is expected that enrolment will grow from 10,200 to over 15,000 undergraduate and graduate students. Faculty and staff levels will rise proportionally to meet the needs of an increased student population.

Space needs will increase dramatically to meet these needs. Currently facing a space shortage, UTSC will require significant expansion to meet its space allocation target. This target, 85% of the Council of Ontario University space standards, will require investment in research, teaching, athletic and other space types.

University growth will also create demand for other types of space. Demand for on-campus residences will increase, including new forms of housing for graduate students and potentially even staff and faculty. Enhanced arts and cultural facilities, such as a new

performing arts centre, will be required to ensure high quality student experience. Finally, with an increased population will come increased demand for day-to-day needs, such as restaurant, retails and other services.

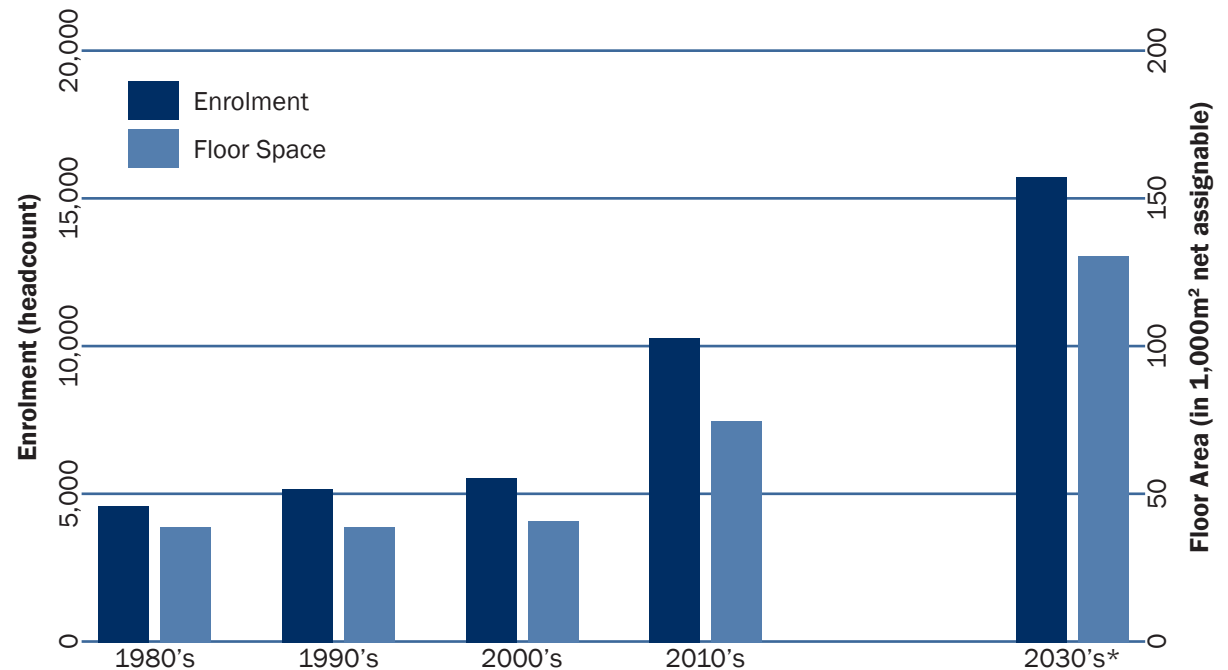


Figure 2.1: Recent trends and current planning suggest rapid enrolment growth and continued building to accommodate the current and future population.

* Enrolment target based on University of Toronto's *Towards 2030 plan*

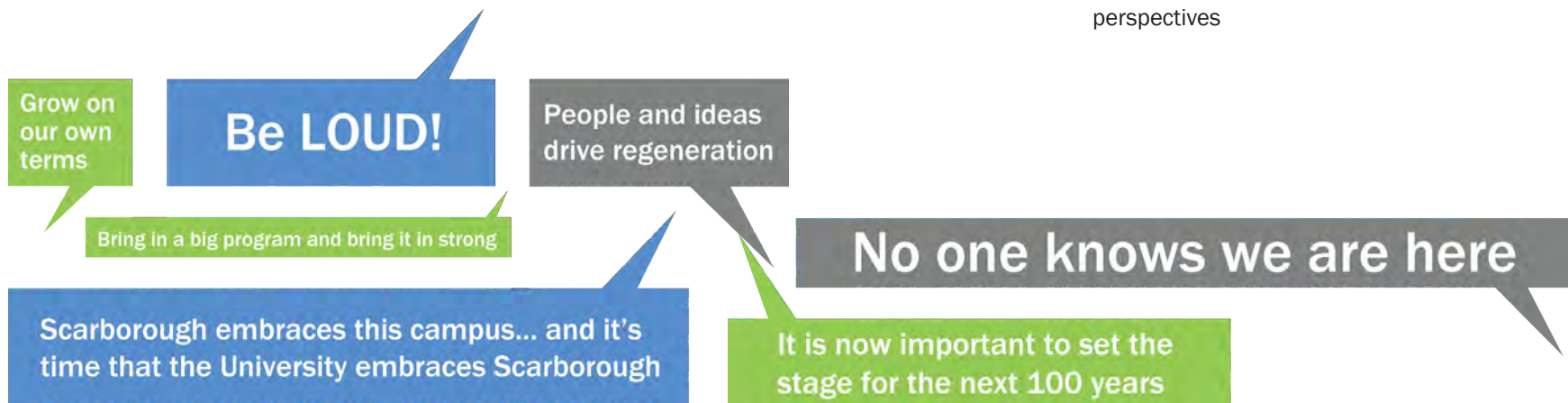
The campus vision captured the guiding principles for the master plan

The campus vision process was initiated in early 2008 to determine a new future for the UTSC campus. The process included university governors, faculty, staff, students, alumni and external participants, including business leaders, government officials, planners, architects and community members. Developed through a highly consultative and consensus-building process, the visioning process included a series of stakeholder interviews, visioning workshops, stakeholder meetings and open houses. Members of the university community, neighbours and partners all contributed to the vision, taking inspiration from some of the great university campuses of the country and beyond, to establish vision principles to guide the creation of the campus master plan.

The campus vision principles ensure that each future step in the growth of the campus will reinforce the essence of university life, including supporting academic and research excellence, incorporating high-quality facilities, enhancing student life, providing an exceptional campus setting, engaging the surrounding community, and promote UTSC's regional presence and growing international reputation. The following is a summary of the six campus vision principles, as outlined in the June 2009 campus vision brochure.

1. Supporting the Academic Mission

UTSC's 2008 Strategic Plan defines new directions in teaching, research, and graduate programs that build upon UTSC's foundations of academic excellence and its diverse range of undergraduate offerings. A four-fold increase in the number of graduate students, to more than 1,000, is planned for the long term. The Campus Vision calls for space to accommodate new faculty hires and program expansion and to support a mission of academic innovation and the pursuit of emerging areas of scholarship, disciplinary and interdisciplinary excellence, experiential and co-operative education, and programs that foster global perspectives



Members of the university community, neighbours and partners all contributed to the vision, taking inspiration from some of the great university campuses of the country and beyond, to establish the vision principles to guide the creation of the campus master plan.

2. Shaping a Distinctive Reputation and Profile

UTSC is emerging as a distinctive university campus with greater autonomy within the UofT tri-campus system and a growing international reputation. As UTSC continues to foster global relationships and attract international students and faculty, it also aims to increase its visibility in the community and region. A new campus experience will represent a bold, relevant and clearly defined identity for the university. It will enhance UTSC's regional presence and help build partnerships with local institutions and resources.

3. Providing High Standard Facilities

Having maximized the use of existing facilities, UTSC has a substantial shortage of facilities for high-calibre research and teaching, and it lacks the support facilities appropriate for a campus of its size. However, it has vast developable lands available for campus growth and expansion. New investment will see the construction of multi-functional academic buildings that accommodate teaching and research, and technology-enriched study space. Partnership opportunities may also be leveraged to provide student housing, cultural, athletic and other facilities that complement university objectives.

4. Facilitating a Vibrant Campus Life

UTSC comprises a diverse community of active and engaged students, many of whom are rooted in an equally diverse surrounding neighbourhood. Faced with a limited number of event spaces or amenities on campus or in the vicinity, students find it difficult to maximize life beyond the classroom, and instead experience the university as a commuter campus. Similarly, surrounding residents cannot participate in the life of the campus due to limited amenities and a limited connection to the university.

The future campus will be a hub of cultural and intellectual activity outside the classroom and integrated with the surrounding community to support the development of restaurants, cafés, retail shops and other assets on and near campus. It will keep the university community on campus through housing, food services and events, and will invite the community onto campus to optimize use of facilities and create greater vibrancy in events and everyday life.



UTSC's crowded hallways contain a diversity of students

5. Maximizing Transportation Options

The Campus Vision promotes a shift from car dependency to a multi-modal future. Walking, cycling and using transit will become real alternatives to car travel.

Investing in Transit:

With planned rapid transit investments, the campus will become transit-oriented and support connections throughout surrounding regions. Integrated within the heart of the campus and built around a new rapid transit station, a central transportation hub will be a focal point for the campus and provide safe and accessible travel options, regional connectivity for the university and surrounding community, and multi-modal connectivity for bicycle, pedestrian and vehicular travel.

Supporting Pedestrians and Cyclists:

The campus will be designed to support active transportation, including walking and cycling, and ensure access for people with disabilities. The future campus will support the development of pedestrian and bike trails on and to campus, provide bike parking and other support facilities for cycling, and ensure universal design for people with mobility impairments.

Managing Cars:

The university will reduce reliance on single occupant vehicles and reduce campus impacts from parking and vehicular activity by pursuing a travel demand management program, designing high-quality pickup and drop-off facilities, moving parking to campus edges and investing in structured parking.

6. Designing a Great Campus

Covering lands of 300 acres, the UTSC campus divides into three zones: the South Campus, the North Campus and the ravine, which together will form a cohesive, great campus experience. The physical campus of UTSC will be designed and planned to support the university's role as an academically rich, comprehensive university campus, with a growing international reputation and regional presence in the eastern GTA.

Refining the South Campus & Ravine:

With award-winning structures and an intimate design, UTSC's current campus area (defined as the 'South Campus') has nearly reached its optimal capacity. New development will serve to update and repurpose existing facilities, with some additional growth along street frontages to enhance the university's presence and create stronger linkages to developments to the north and the ravine to the south. South Campus refinements include new open spaces reclaimed from parking facilities; improved way-finding, lighting and landscaping; and stronger connections to the North Campus and ravine.

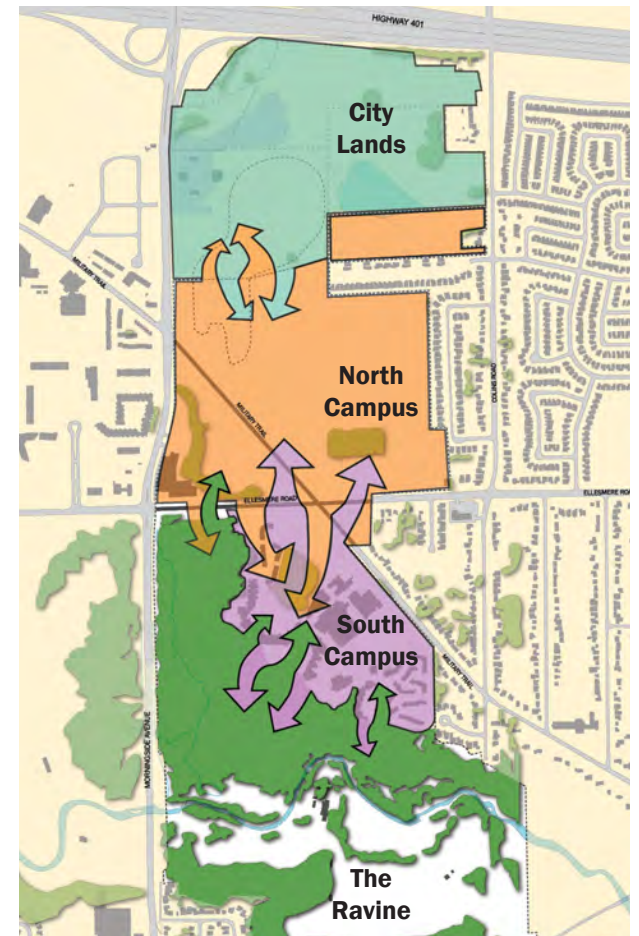
The ravine will play a more prominent role for the university and surrounding community. Existing uses will be strengthened through access and trail improvements, lighting and safety facilities, and increased programming. An integrated vision for the ravine will be developed to enhance UTSC's profile, link academic programs, and identify and attract new users.

Growing the North Campus:

The area of UTSC land north of Ellesmere Road, which has a geographic footprint greater than the South Campus, is the focal point for new university development. A critical mass of facilities and activities will establish UTSC as the major university for the eastern GTA and give shape to many elements of the Campus Vision. The North Campus be a symbolic gateway for UTSC, with landscape and landmark buildings that announce UTSC's regional presence. Built in an intimate and quad-like manner, state-of-the-art facilities will support research, learning and community building. The North Campus will include opportunities for partnerships on campus and adjacent lands to support the university's mission, including complementary development on City lands to the north that are supportive of the university's mission.

Anchoring a New Campus Core in the Context of an Evolving City:

A new centre of gravity for campus and community life will emerge at the crossroads between the North and South campuses. Located at the interface between the university and city, well-planned buildings and public spaces will function as a catalyst for mixed use development and neighbourhood change. The new mixed-use centre will provide academic and support facilities for the entire UTSC community and surrounding neighbours. With an urban and pedestrian-friendly character, it will serve as a vibrant 'downtown' core. In addition to featuring public gathering spaces, retail, restaurants, event space and housing, the Campus Core will serve as a regional transportation hub centred around a new rapid transit stop.



Ensuring the integration of the university lands and adjacent resources are critical to the success of the master plan

The key drivers provided a framework to structure the evolution of the campus

Eight key drivers were identified early in the campus master plan process. Due to the absence of surrounding developments and overall urban context, the drivers were identified to serve as clues and starting points from which to frame the evolution of campus. The drivers represent a series of developments, major initiatives and design directions that together formed a rudimentary framework for the evolution of the campus. In conjunction with the campus vision, the key drivers provided the guiding structure for the development of the master plan.

1. The Instructional Centre

Now nearing completion, this project was the first step forward in the development of the North Campus.

2. The Aquatics Centre and Field House

The Pan Am Games facility is being designed around the new campus structure.

3. Rapid Transit Investments

Planned transit investments were refined to better integrate into the campus and connect to the region.

4. Military Trail Realignment

A new Military Trail route will create a unified academic precinct and enhance transit service.

5. Integrated Transit Stops

Transit stops will be embedded as focal points within the campus to enhance transit use.

6. Campus Core Pedestrian Connections

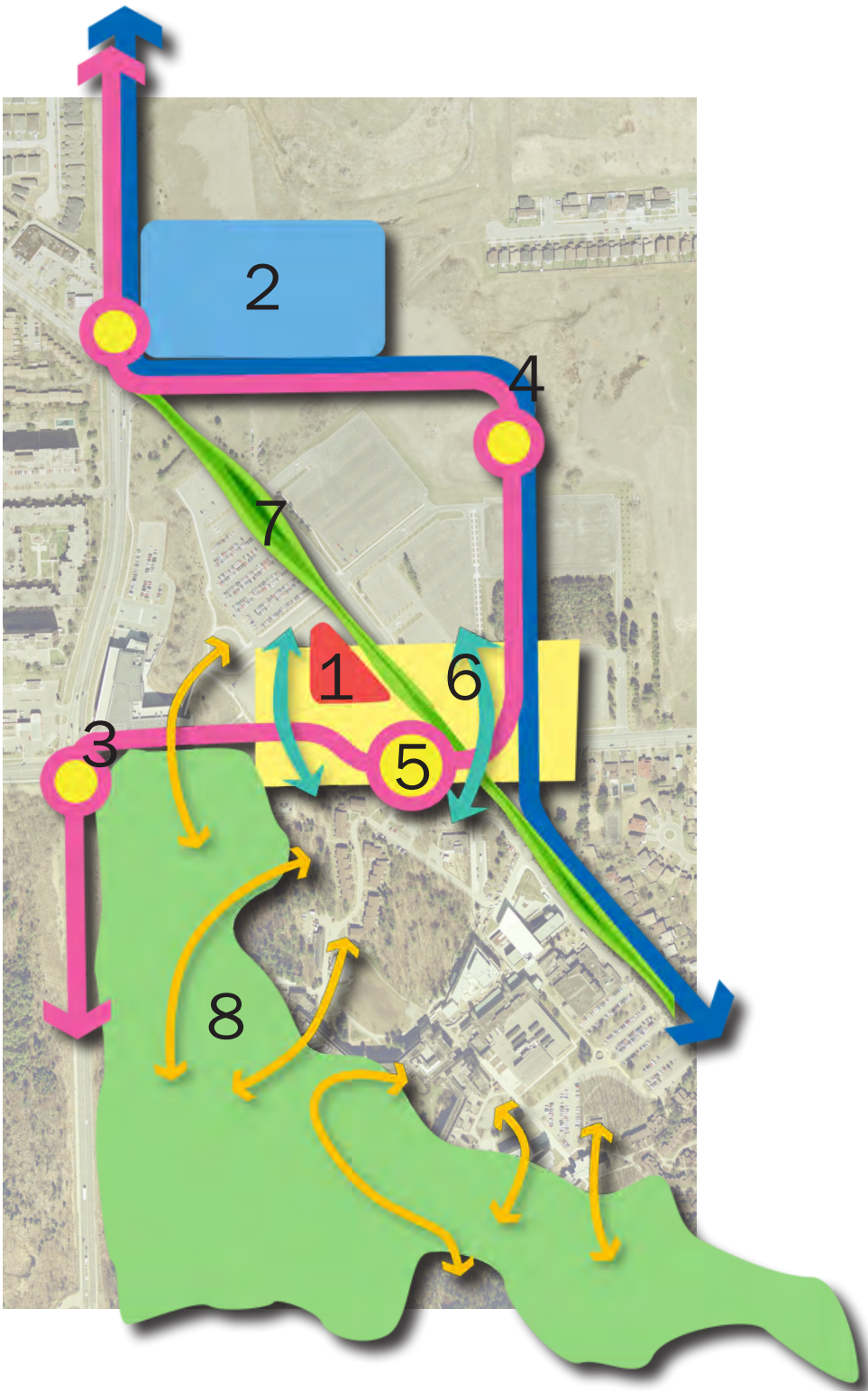
Links between the North and South Campuses will be enhanced to maintain a cohesive, integrated campus.

7. Military Trail Landscape

The existing Military Trail will become a landscaped pedestrian spine and a campus focal point.

8. Ravine Connectivity & Programmatic Improvements

Enhanced connectivity and use of the ravine will yield academic, recreational and natural heritage benefits.





View looking northwest to the North Campus



3. THE MASTER PLAN

The master plan envisions the complete transformation of the University of Toronto Scarborough. The future of the campus lies to the north, where the parking lots and the intersection of Military Trail and Ellesmere will be transformed through new growth and development.



Compact and integrated, the university will refocus on a new Campus Core at the intersection of Ellesmere Road and the realigned Military Trail. Developed as a mixed use hub for the university and community, the Core will include academic, retail, restaurant, office and residential uses. Significant development capacity throughout the North Campus will ensure that university and other uses are accommodated, including residential, research, technological and institutional uses.

The Campus Core at Military Trail and Ellesmere Road will be the interface between the university and city, accommodating university and mixed uses at high densities.
(view looking southwest to the intersection of Military Trail and Ellesmere Road)

Connected and engaged, enhanced circulation networks will effectively serve campus, built around a new Military Trail and rapid transit investments. Pedestrian and bicycle improvements will strengthen linkages between the North Campus, the South Campus and the ravine. Embedded in the surrounding city, the campus will provide open space resources, retail and cultural activities and transportation options for the university and community.



The campus will be embedded in the fabric of the city, engaging with the surrounding edges of campus and providing enhanced connectivity to the region. The current Military Trail will extend as a pedestrian spine through the heart of the North Campus.
(view of the North and South Campus looking southeast)



Open and green, landscape investment will enhance the campus setting. Old Military Trail will be reimagined as a landscaped pedestrian spine to link the North and South Campuses, serving as the landscaped focal point for the North Campus academic precinct. New campus landscapes and open spaces will be created, building on existing open spaces and the ravine. A focus on environmental management will ensure the protection of the ravine landscape and the enhancement of natural features and functions throughout the campus.

The ravine will continue to be a prominent part of the campus, connected with new open spaces, naturalized landscapes and enhanced pedestrian and bicycle links.
(view of the North Campus looking southwest)

The Master Plan is further detailed in the following four sections:

3.1 Building a new Campus

3.2 Enhancing the Open Space Network

3.3 Ensuring Mobility

3.4 Achieving Sustainable Systems

Specific planning recommendations related to each of these sections are contained in Chapter 4 of this plan.



As the campus embarks on this plan to develop the North Campus, it is important that the campus vision understood with a long-term view. This master plan represents this long-term view, outlining large patterns of development that can serve the needs of the campus over the next 50 years or more. Given that the North Campus is mostly unbuilt, it was necessary to prepare a comprehensive development framework for the entire area to understand how future development should be positioned within new street and open space networks.

With this framework in place, the university is positioned to make more detailed development decisions with a full understanding of the larger context. In the near future, as development unfolds, elements of this plan will be phased to meet the requirements of the day for the university. The following master plan principles create the essential conditions for the realization of the UTSC Master Plan, providing a physical framework for the future growth and evolution of the University of Toronto Scarborough campus.

1. Military Trail is to be realigned to form a single cohesive North Campus academic precinct and to support transit investments.
2. The lands surrounding the intersection of Military Trail and Ellesmere Road are to be developed as a mixed-use, high-density Campus/City urban core, which will support residential, retail and other land uses in addition to the full range of academic uses.
3. An internal campus street will bridge over Ellesmere Road to provide enhanced pedestrian, transit and vehicular connectivity between the North and South Campuses.
4. Five major campus open spaces, as identified in section 3.2.2, will be protected from future development and serve as the focus for place-making landscape investments.
5. Future rapid transit investments on Ellesmere Road, Morningside Avenue and Military Trail are to be embedded into the campus structure to ensure high quality transit access.
6. In the long-term future, large surface parking lots will be replaced with parking structures and parking below new buildings.
7. Aside from mixed use buildings and partnership uses located along Military Trail and in the Campus Core, the South Campus and the area of the North Campus bounded by the realigned Military Trail will be reserved primarily for academic uses.
8. The eastern edge of the North Campus will be developed with low-rise residential uses to ensure an appropriate transition to the surrounding neighbourhood. Additional residential development may occur in this area of campus, including graduate student, staff, faculty and leasehold market housing.
9. The North Campus lands will support partnership development opportunities, such as office or research developments that are complementary to the university mission, but the lands should remain under university ownership.
10. The university will engage with planning for the City lands immediately north of the campus to support complementary development, ensure integration with university uses and provide appropriate connections.



3.1 Building a New Campus

With the transformative change expected at UTSC, the university will truly be building a new campus. The master plan provides a robust framework for the future growth and evolution of UTSC's campus. In addition to university academic uses, a wide variety of land uses and activities will be accommodated within the campus development framework. This will provide flexible and diverse city-building opportunities while ensuring the university can meet its development needs in the long term.

This section of the master plan provides direction for the overall growth and development on campus. It is organized by the following six areas of campus growth and development.

1. Ensuring Cohesive Academic Development
2. Building the Campus Core
3. Providing Diverse Housing Options
4. Supporting Athletic Opportunities
5. Engaging in Partnership Development
6. Supporting Re-use of the City Lands

While the development framework identified in the master plan represents the long-term campus structure, the detailed buildings shown in the renderings and drawings of this plan are a conceptual vision for what the future campus could look like. The building types and architecture, landscape details

and other detailed characteristics shown in the illustrations and renderings are not intended to be an accurate representation of what the campus will look like in the long-term future.

As development progresses, precinct plans will be prepared for clusters of adjacent and related buildings, providing further detail and guidelines for new development. Precinct plans will address various systems and development considerations, such as pedestrian and vehicular circulation, site servicing, landscape and open space, built form relationships and other important elements of the campus. Alongside the Master Plan, precinct plans will provide more detailed guidance to ensure that development is context specific and reflects the most current planning approach for the campus.

Legend	
Academic	
Residential	
Athletics & Recreation	
Partnership Development	
Mixed Use/Campus Core	
City Lands	



Figure 3.1: The campus will primarily support academic growth, but can accommodate a range of other development



View of the North Campus looking northwest

3.1.1 Ensuring Cohesive Academic Development

The university's primary role is to support the academic mission. This plan reinforces this role, outlining appropriate patterns of development that support and prioritize academic growth in a campus environment that optimizes learning. Most of the developable area of the campus is reserved exclusively for academic use, ensuring adequate capacity for university growth over the next century. Further development capacity details are provided in section 5.1 of this plan.



The primary goal of this plan is to identify development sites and guidelines for new research and teaching buildings within an appropriate campus environment.

The North Campus will serve as the focal point for academic growth. First established with the new Instructional Centre, this new academic precinct includes the large development area created by the realignment of Military Trail. The North Campus academic precinct will be the primary home for new academic growth, lined with academic and mixed uses along Military Trail and Ellesmere Road. Buildings will be designed to fit within larger development clusters and oriented toward open spaces and pedestrian routes. Classrooms and teaching labs will be located and clustered to minimize travel distances between during class changes.

The South Campus represents a significant legacy that will continue to play an important role for the university. Some new academic development can be accommodated in the South Campus, but mostly around the Campus Core and integrated with other uses and activities. As buildings age and new opportunities present themselves, building renewal, renovation and small additions will be considered. The historic Science and Humanities Wings will be preserved as the historic origins of campus, though the uses within these buildings may change over time to accommodate functions that can better utilize existing space.



Artist's rendering of the North Campus academic precinct



View of the Campus Core at Military Trail and Ellesmere, looking southeast toward the South Campus

3.1.2 Building the Campus Core

The Campus Core will be the new heart of the university. Developed as a high density, mixed use hub, the Campus Core will feature a wide variety of buildings and uses built around the intersection of Military Trail and Ellesmere. Alongside academic, office and residential uses, active uses will be encouraged, including retail, restaurant and entertainment/cultural uses. As the interface between the university and community, the Campus Core will welcome all users and residents



The Campus Core will serve as a focal point for both the university and surrounding community. Alongside academic, office and residential uses, active uses will be encouraged, including retail, restaurant and entertainment/cultural uses.

The Campus Core will serve as a focal point for both the university and surrounding community. It will function as a 'town centre', providing a range of services, activities and amenities that will activate this location and generate 24-hour activity at the university. The planned rapid transit station will be accommodated within a mixed use building in the Campus Core, serving as an important hub and focal point for movement to and from the campus and surrounding community.

The Campus Core also provides an important linking function, serving as the junction between the North and South Campuses. Strong pedestrian linkages will be critical to the success of the campus, as thousands of students, staff and faculty will cross Ellesmere Road and pass through the Campus Core every day. Pedestrian improvements include a streamlined intersection design at Military Trail and Ellesmere, with enhanced pedestrian crossings and plazas. A new bridge will also cross Ellesmere Road near Centennial College, creating an additional pedestrian crossing and enhancing connectivity between the north and south academic precincts.



Artist's rendering of the Campus Core looking north from the South Campus along the Military Trail pedestrian spine



View north of the residential area on the east side of the North Campus

3.1.3 Providing Diverse Housing Options

University housing is limited in both capacity and the types of housing available to students. With increased housing demand and the need for significant capital investment to maintain current housing stock, UTSC will see significant investment in university housing over the long term to meet the needs of a larger student body and new residents, including graduate students, staff and faculty.



UTSC will see significant investment in university housing to meet the needs of a larger student body and new residents, including graduate students, staff and faculty.

The future campus offers a wide variety of options for the development of housing. Beyond the necessary expansion of undergraduate dormitory-type residences, future residential development at UTSC can meet the housing needs of graduate students and families, staff, and faculty. Mid-rise and high-rise development areas, such as the Campus Core and along Military Trail in the North Campus, will absorb primarily undergraduate and some graduate housing. Housing for graduate families, staff and faculty will be accommodated at the periphery of campus in grade related housing, including singles, semis and town houses. These areas may also be appropriate for market housing through either leasehold or ownership opportunities.

Ultimately, a diversity of housing options throughout campus will strengthen the campus environment and support a vibrant campus core. On-campus housing will create a viable university community, enhancing the on-campus experience by activating the campus beyond the typical class hours. A diversity of residential uses will also increase demand for retail and other active uses in the Campus Core, ensuring the success of this mixed-use hub.



The new Joan Foley Residence Hall on the South Campus



View of the North Campus athletics precinct at the intersection of Military Trail and Morningside Avenue

3.1.4 Supporting Athletic Opportunities

The planned Pan Am aquatics centre and field house represents the first step in the development of a comprehensive athletics precinct on the North Campus and the City lands. The world-class aquatics centre and field house will serve as the heart of this precinct, and other athletics uses will be encouraged in surrounding university and city lands, including sports fields, ice rinks, indoor athletic facilities and parkland. Proximity and connectivity will be important to support this growing precinct and to minimize redundant infrastructure and support facilities.



The planned Pan Am aquatics centre and field house represents the first step in the development of a comprehensive athletics precinct on the North Campus and the City lands.

Existing campus athletic and recreational facilities will continue to play a role for the university, though some functions may diminish over time. Field-based athletic uses will remain in the ravine, though demand for fields may ultimately be accommodated in the North Campus athletics precinct. The South Campus Athletics Centre will continue to support recreational uses in the short term, but may be renovated or redeveloped for other uses depending on demand.

The area immediately south of the planned aquatics centre and field house could be developed, through partnerships, as a university hotel and conference centre. Though not part of the athletics precinct, this centre would provide support for travelling athletes, coaching staff and spectators, in addition to supporting university-related functions and events.



Artist's rendering looking southeast from the intersection of Military Trail and Morningside Avenue



View of the Military Trail partnership development area, looking southwest

3.1.5 Engaging in Partnership Development

With a land inventory unlike any other location in the GTA, UTSC's North Campus has the potential to accommodate a variety of partnership uses that support and complement the core mission of teaching and research. This potential is enhanced by UTSC's location along the 401 and future major transit routes. The large population of students and professors also represent a significant intellectual asset. These factors make the UTSC campus very attractive for potential industry-university partnerships.



With a land inventory unlike any other location in the GTA, UTSC's North Campus has the potential to accommodate a variety of partnership uses that support and complement the core mission of teaching and research.

Industry partnership developments bring co-op educational opportunities, research sharing and innovation, and knowledge sharing, all of which support the university's core mission. Attracting partnership uses to the university campus will have a variety of other beneficial effects, including creating a critical mass of people to activate and enliven the campus, generating more demand for retail and services, enhancing the diversity of the university population and generating revenue for the university.

While partnership developments may play an important role in the university's future, they will not adversely impact the development of core academic resources. Partnership uses will primarily be located east of the new Military Trail at the periphery of the academic precinct. Academic uses should be encouraged to co-locate with partnership uses to support relationships. The ground level of partnership buildings should accommodate a mix of active uses to ensure integration with the campus and to provide additional benefits to the surrounding population.

The City Lands to the north may also be appropriate for partnership developments, subject to the city's planning intentions for this land. This will allow for proximity to the university and its resources while preserving university lands for university or complementary uses.



View of the partnership development area, looking southeast



View looking north of the linear greenspace running parallel to the realigned Military Trail, which will serve as a mixing area for university and partnership uses



View of the City Lands north of campus looking northeast

3.1.6 Supporting Re-use of the City Lands

The City Lands to the north of the university present many opportunities for complementary development, but come with a series of challenges. As a former landfill, some areas of this site present challenges for redevelopment, and access to the site is limited by the 401. Upon overcoming these challenges, the City Lands have the potential to accommodate land uses that complement and support the university mission. Ultimately, their redevelopment will reinforce the university's important role and profile in the eastern GTA.



The City Lands have the potential to accommodate land uses that complement and support the university mission. Ultimately, their redevelopment will reinforce the university's important role and profile in the eastern GTA.

While the City Land's challenges provide opportunities for naturalization and new parkland, the university is also interested in seeing other complementary uses for this large and strategically important site. Industry partnerships are appropriate, given the site's presence on the 401 and its proximity to the university. Residential development would take advantage of transportation infrastructure and create a larger community around the university's mixed use hub in the Campus Core.

Regardless of potential future uses, it will be critical to engage the city in planning for these lands. Integration with the university, including street, pedestrian and bicycle network connections as well as natural heritage and recreational connections will enhance opportunities for both the university and the city.



The City lands have the potential for a combination of new development, recreational uses and natural areas



3.2 Enhancing the Open Space Network

From its inception, UTSC has benefited from an extensive and dramatic open space network. The campus's unique location at the edge of the Highland Creek ravine creates an unrivalled natural backdrop for the campus and establishes a pattern of natural features across the campus. Though dominated by the natural landscape of the ravine, the UTSC campus is also characterized by a smaller system of landscaped areas, pedestrian paths and larger open spaces. These open spaces play a variety of important roles for the campus, in addition to providing a local setting and backdrop for campus buildings.

Not just a picturesque setting for the campus, the open space network performs a series of important functions. Many open spaces support university activities, including outdoor teaching and study, relaxation and communion, and recreation. Open spaces also provide enjoyable means of travelling through the campus, allowing everyday users to pass through plazas, large commons, landscaped streets and other spaces. The network plays an important role in drawing in the surrounding community, whether to enjoy the landscapes or simply to get to their destination.

The open space qualities of the South Campus will be extended into the North Campus, as will the natural landscape of the ravine. The intimate landscapes of the South Campus will be mirrored in the North Campus, and new major landscape projects will create new campus focal points for an enhanced open space network.

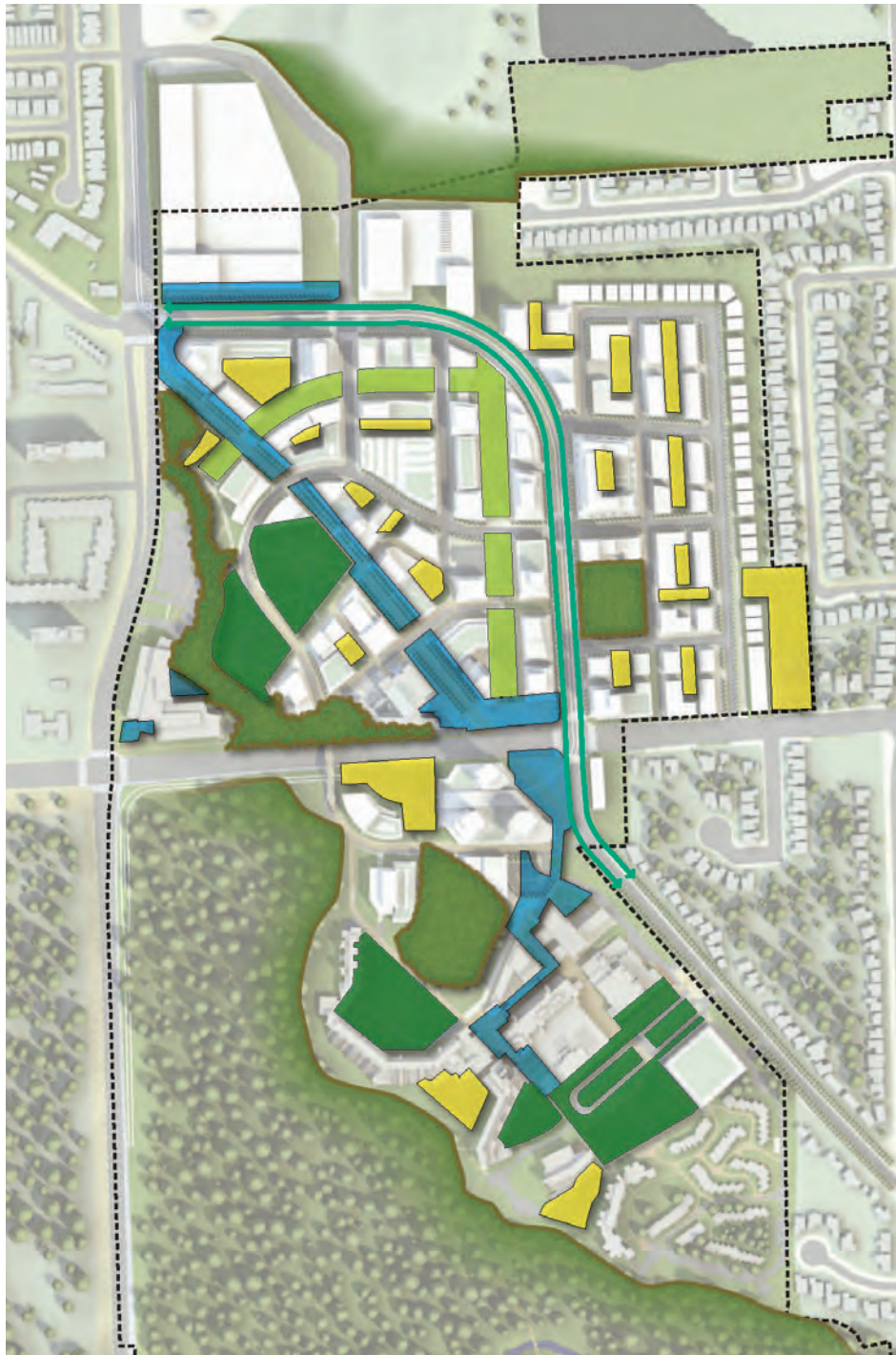


Figure 3.2: The campus open space network

3.2.1 Extending the Pattern of Landscape and Wayfinding

Over time, the South Campus has grown into a high quality pedestrian-oriented campus. Built around the original Andrew’s buildings, the diverse collection of buildings exist within a larger landscaped setting. The network of paths and open spaces allow for an easy understanding of the campus and an enjoyable pedestrian experience. This pattern of buildings within a pedestrian-oriented landscape at the edge of the ravine is what makes the UTSC campus special.

Legend

- Major pedestrian corridors and plazas
- Major campus open spaces
- Courtyards and interstitial spaces
- Natural features
- Major linkages
- Military Trail

The pattern of the South Campus building and landscapes will extend to the North Campus. A large variety of high quality landscaped areas will contribute to the interconnected open space network, ranging from a large commons to the smaller interstitial spaces that make a campus special. The Military Trail pedestrian spine and central open space will serve as the focal point for the North Campus open space network, complemented by a series of courtyards, plazas, landscaped streets and other landscaped areas. Visual and physical ravine connections will create a more integrated natural heritage network, and a new park at the eastern edge of the North Campus will provide a shared open space for the university and adjacent community.

The open space network and associated pedestrian routes also provide the primary means of wayfinding through campus. Through the system of overlapping open spaces, walks, courts and streets, campus users, visitors and members of the surrounding community experience a pleasant and understandable means of passing through campus.



Artist's rendering of small, but active open spaces on the North Campus



Figure 3.3: Major campus open spaces

3.2.2 Implementing Major Landscape Initiatives

A series of major landscape initiatives will transform the character and identity of the campus. Located primarily in high pedestrian volume areas, these major open spaces will serve as focal points for campus activity. Some of these initiatives are located on existing developed areas of campus and can be implemented immediately. Other initiatives will emerge over time with the development of the North Campus. The following provides general guidelines for the design and implementation of these major initiatives.

Legend

 Major landscape initiative

Opposing Page:
The cherry orchard and other landscape elements will together form the South Campus Common, a new major landscape initiative

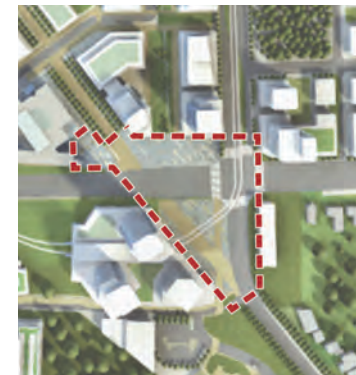


Campus Core Pedestrian Plaza



View of the Campus Core pedestrian plaza looking northwest

The Campus Core will be the face of the university to the surrounding city and the centre of campus and community activity. With a wide range of active uses spanning all corners of the intersection, the pedestrian plaza must join together the North and South Campuses and provide extensive hardscaped areas for people to congregate. A coordinated and unified landscape treatment on all corners of the intersection will minimize perceived distances, and can be extended outward to the edges of the Campus Core to define this important space. Landscape design will be used to safely direct pedestrian traffic to crosswalks, with large crush space at crosswalks to accommodate high pedestrian volumes. The pedestrian plaza in front of the transit station should be carefully designed in consultation with the TTC to minimize conflicts with transit operations.





Artist's rendering of the Campus Core looking north from the South Campus along the Military Trail pedestrian spine

Opposing page:
Artist's rendering looking south along
the Military Trail pedestrian spine at
the large North Common open space

Military Trail Pedestrian Spine



View of the Military Trail pedestrian spine looking southeast

With the realignment of Military Trail, the existing street will be transformed into a major pedestrian spine through the North Campus academic precinct. The pedestrian spine will tie together the precinct, connecting from the Campus Core through to the aquatics centre and field house. This landscape will be developed as a wide, hardscaped pedestrian route, with many opportunities for street furniture, vegetation and other landscape enhancements. As the North Campus develops, the pedestrian spine will provide a larger structure upon which to grow additional landscape projects, large and small, including the North Campus Common. Early implementation of this landscape initiative could be pursued to improve connectivity to the aquatics centre and field house and to create a strong identity for the North Campus.





Opposing Page:
Artist's rendering looking south
to the large North Common on
the North Campus

North Campus Common



The North Campus Common will serve as a focal point for the North Campus academic precinct. Built along the Military Trail pedestrian spine, the Common will draw the ravine into the built campus, employing landscape features and vegetation that integrate with and complement the natural landscape of the ravine. Designed as a large open space to support large outdoor events and recreational activities, the space will support open views and vistas out toward the Highland Creek ravine. Adjacent buildings will be designed to face onto the open space and can support active uses at grade along its edges.



View of the North Campus Common looking northeast



Science Common



View of the Science Common looking southwest

The open space in front of the S-Wing and Science Research Building is the largest on the South Campus. It primarily supports informal recreation opportunities on its large lawn, but also provides natural heritage features and functions through the large adjacent woodlot. Recent space constraints have seen a cluster of temporary office structures located in the Science Common. Following their future removal, the Science Common will be renewed through investment in pedestrian paths, seating areas and other landscape features. Relationships and connections to the adjacent buildings will be enhanced. Limited pedestrian connections will also pass through the woodlot, which will be appropriately managed to minimize human impacts and enhance biodiversity.



South Campus Common



View of the South Campus Common looking northwest

The large surface parking lots on the South Campus currently divides a variety of smaller campus landscapes, including the H-Wing cherry orchard, the Student Residence Centre woodlot, the Management Building open space and the lawn beside the ARC. Relocation of surface parking lots and the implementation of a new pick-up/drop-off loop provides an exciting opportunity to knit together these landscapes into a larger open space. Together, they will form the South Campus Common, providing a landscaped link from the ravine through to Military Trail. Consistent treatment will tie the connected landscapes together and provide a shared setting for surrounding buildings. While partially used for pick-up/drop-off, the loop will feature a naturalized landscape with stormwater management features that will integrated with the larger landscape initiative.





View of the ravine lands looking northwest toward the South Campus

3.2.3 Enhancing and Reconnecting the Ravine

The ravine is a defining feature of the UTSC campus, both spatially and in terms of the university's academic mission and image. The ravine plays an important functional role, providing for passive and active recreational spaces, campus views, trails, naturalized areas and habitat, and play a fundamental role for both the natural drainage and storm water networks. The ravine also serves as the location for important teaching and research uses.

An important part of the university's history, UTSC has retained ownership and management of the Highland Creek ravine. The ravine preserves the experience of UTSC's natural setting, maintaining views and recalling the natural history of the university's land-base. The ravine lands are also an invaluable environmental asset and open space resource for the larger community. It serves as an outdoor classroom and laboratory, similar in many ways to built classrooms and labs on the South Campus. It also offers a location for a variety of other facilities and uses that cannot be accommodated in the built campus, such as athletic fields and tennis courts, conference/event facilities, large-scale outdoor event and recreation spaces, and allotment gardens.

From a climate change perspective, the ravine plays a significant role in carbon sequestration, but is also very sensitive to impacts from climate change, including onset of invasive species, more extreme weather events and vegetation changes due to temperature fluctuations.

Not just an isolated greenspace, the ravine forms part of a regional greenway. The Highland Creek watershed extends from southern Markham down to Lake Ontario and in the Scarborough portion of the watershed includes a large greenway of connected open spaces consisting primarily of city parks. The UTSC ravine is a key link in this greenway system, playing an important role for ecological connectivity in the Highland Creek watershed. The ravine also plays an important role in pedestrian and bicycle connectivity, supporting a portion of a regional trail system that connects through the campus directly to the Waterfront Trail along Lake Ontario.

As a legacy to protect and enhance for future generations, the ravine is a unique landscape that requires as much attention and care as any other part of the campus. Five principles will guide UTSC's continued stewardship and use of the ravine.



Varsity baseball game in the ravine



The Miller Lash House in the ravine



Research activities in the ravine

Since its inception, the campus has been defined not only by its built environment, but by the expansive Highland Creek ravine. This ravine edge forms a natural boundary between these two parts of the campus, calling attention to the complementary relationship of open space and buildings.

1. Continue to Support Research and Teaching

The ravine is a living laboratory and classroom that plays an important and growing teaching and research role for UTSC and the UofT system as a whole. The university is a national leader in graduate environmental science programs, and the ravine will continue to play an academic role in such areas as climate research, habitat restoration and other areas. Research and teaching activities will continue to support and enhance the natural features and functions of the ravine and minimize adverse impacts to this important natural landscape.

2. Strengthen a Program of Environmental Stewardship

UTSC's responsibility as steward of its campus extends beyond its academic facilities and infrastructure to include the ravine. The ravine lands contain a variety of unique and important natural features and functions that require careful management. While many areas of the ravine have been left relatively untouched, areas such as the riparian zone around Highland Creek have deteriorated due to human impacts, including development, increased stormwater flows and habitat

loss. UTSC will continue to develop management and enhancement approaches in coordination with appropriate agencies, including City of Toronto and Toronto and Region Conservation Authority (TRCA) staff.

3. Promote Recreational Opportunities

In the same way that the ravine provides respite from the built campus, athletic and recreational facilities in the ravine provide relief from the rigours of university academic life. Athletic fields, recreational facilities and the allotment gardens will continue to be part of the ravine. New opportunities for low-impact recreational activities may be explored.

4. Enhance Access to the Ravine

One of the biggest challenges for the ravine is lack of access and connectivity to the university and tablelands. This limits active use of the ravine for academic, athletic and recreational purposes, but also contributes to a lack of community 'ownership'. The regional trail system that passes through the ravine will see direct connections to other trail systems, including the planned East Gattineau multi-use trail. A direct and accessible route will be identified to link the South Campus back to the ravine.

5. Extend the Ravine Natural Landscape into the Campus

Though interrupted by the Centennial College HP Science and Technology Centre, the ravine landscape extends well into the North Campus lands. To protect and enhance this valuable landscape and environmental resource, the ravine natural landscape will be extended onto the tablelands and into the North Campus. Initiatives to support this can include naturalization efforts at the top of bank, development of contributing landscape, implementation of naturalized stormwater facilities and other means.





Natural heritage research activities

3.2.4 Protecting Natural Heritage

Located on the Highland Creek ravine, the campus is part of a much larger natural landscape that extends through to Lake Ontario. Bookended by Morningside Park to the west and Colonel Danforth Park to the south, UTSC's ravine is the most prominent part of UTSC's natural heritage resources and plays a very important role in the regional natural heritage network. Despite the prevalence of the ravine, the campus contains a wide variety of other natural heritage features that contribute to the health of the Highland Creek watershed.

Unlike the ravine, many of the campus natural heritage features are not continuous and primarily take the form of discrete woodlots and plantations. The continued protection and enhancement of campus natural heritage resources will be a priority for the university.

While some natural heritage resources will be impacted by future development, including potential construction of rapid transit infrastructure, the university will implement a comprehensive program of natural heritage protection and enhancement. This will include extending the ravine landscape onto the tableland, strengthening existing woodlots and other resources and expanding connectivity to surrounding natural heritage resources, including those located on the City Lands to the north.

By managing natural heritage impacts, expanding natural heritage resources, enhancing natural heritage connectivity and implementing the ravine enhancements identified in 3.2.3, the university will ensure the continued protection of natural heritage resources as an integrated and functioning part of the campus.



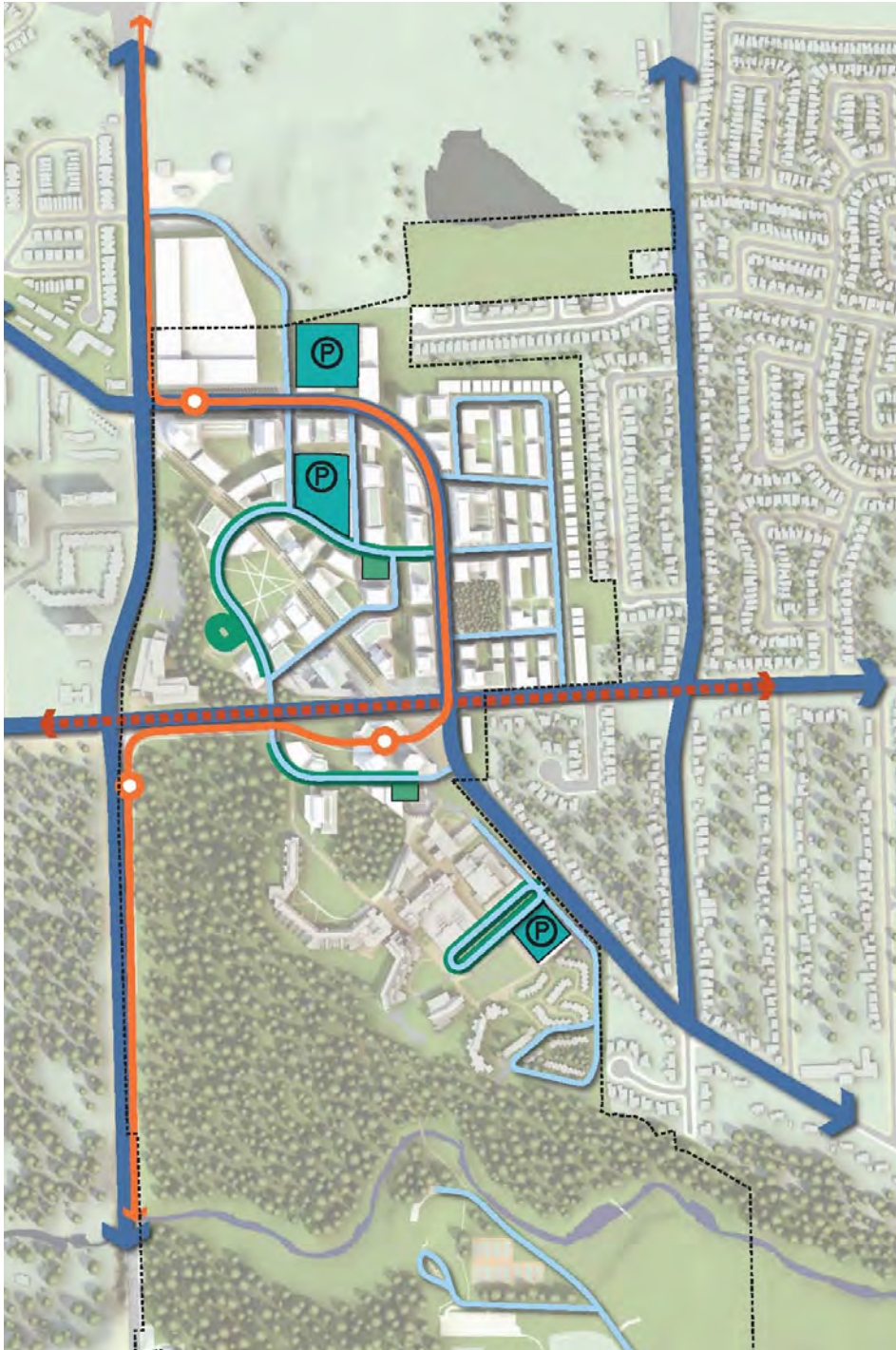
The Humanities Wing garden



3.3 Ensuring Mobility

Every day, thousands of students, staff and faculty travel to UTSC. Once they've reached the campus, whether by car, transit, or bicycle, all become pedestrians. How people get to and travel around within campus has significant impacts on how the campus is structured, how it functions and the overall campus experience.

Providing a diversity of mobility options will ensure full access to campus and shift the university toward more sustainable means of transportation. With the growth of UTSC's presence in the region, enhanced transit connectivity and support for diverse transportation options will ensure that UTSC is fully accessible to its population, the surrounding community and the region.



With planned and potential light rail and bus rapid transit connections into campus, the university will employ a “transit first” approach to favour transit and other travel options over car use.

- Legend**
- Major street
 - Campus street/driveway
 - Rapid transit line
 - Rapid transit station
 - Bus rapid transit line
 - P Major parking structure
 - Pick-up/drop-off location

Figure 3.4: The campus transportation network

While the university will continue to provide parking facilities to support vehicular use, there will be an increased priority on supporting other modes of transportation. Commonly referred to as travel demand management (TDM), the university will discourage single-occupant vehicle travel by implementing disincentives for driving, such as increased parking costs, and providing incentives for other travel means, such as transit and bicycle investments.

The campus itself will provide a high quality pedestrian experience. Designed as a walkable place, the campus environment, including buildings, landscapes, sidewalks and even roads, will prioritize pedestrian activity as the primary means of travel. An expanded and comprehensive internal campus street and pedestrian network will serve new campus development and ensure efficient pedestrian travel. A similar comprehensive bicycle network combined with new secure bicycle parking facilities will ensure safe and convenient bicycle access.

Vehicular activity, while essential, will be directed to arterial streets and the edges of campus to minimize impacts and pedestrian conflicts. In the long term, parking will be accommodated underground or in parking structures. A series of new pick-up/drop-off facilities will be dispersed throughout campus to minimize congestion, and building servicing will be clustered and located to minimize pedestrian conflicts and visual impacts.

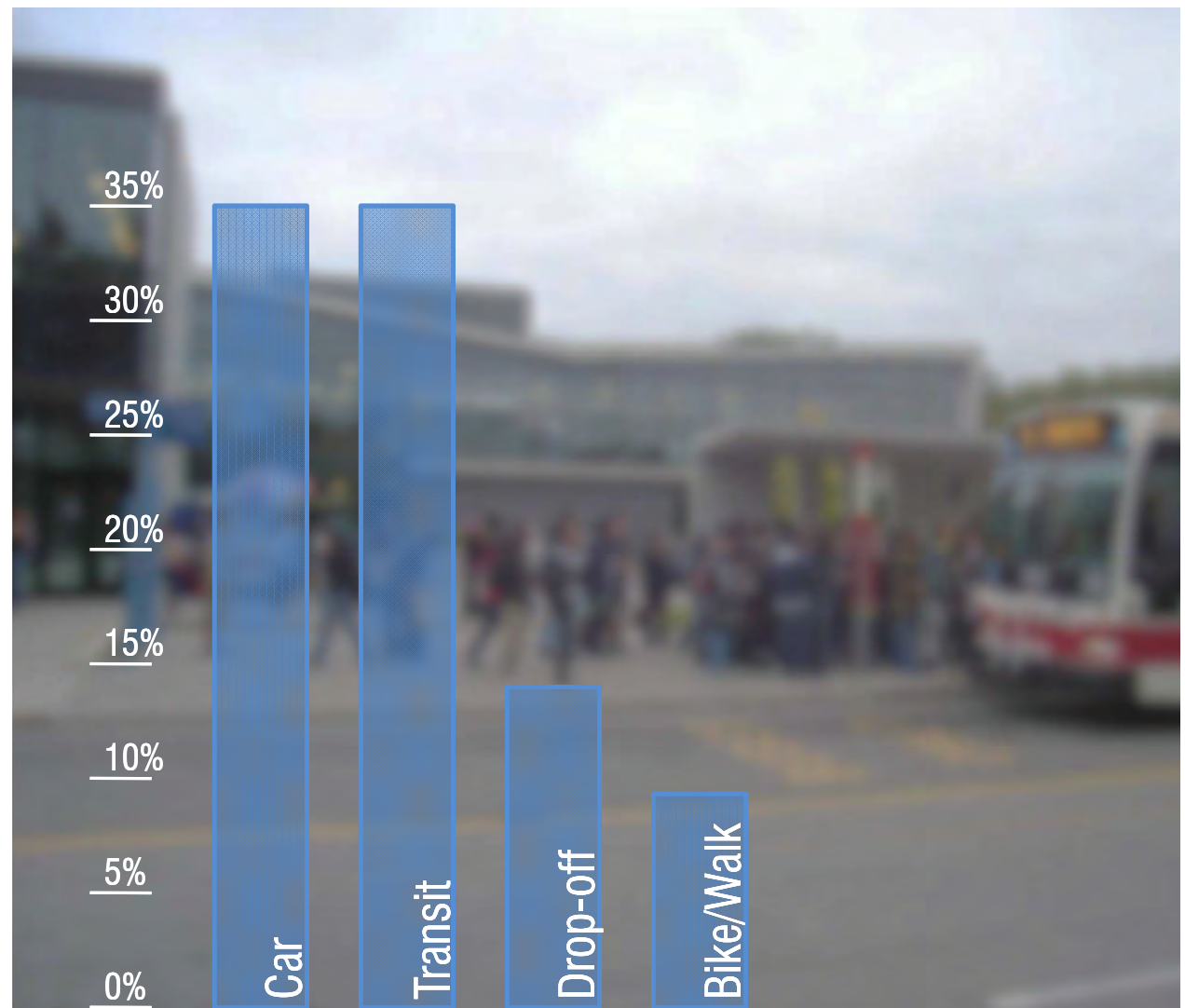
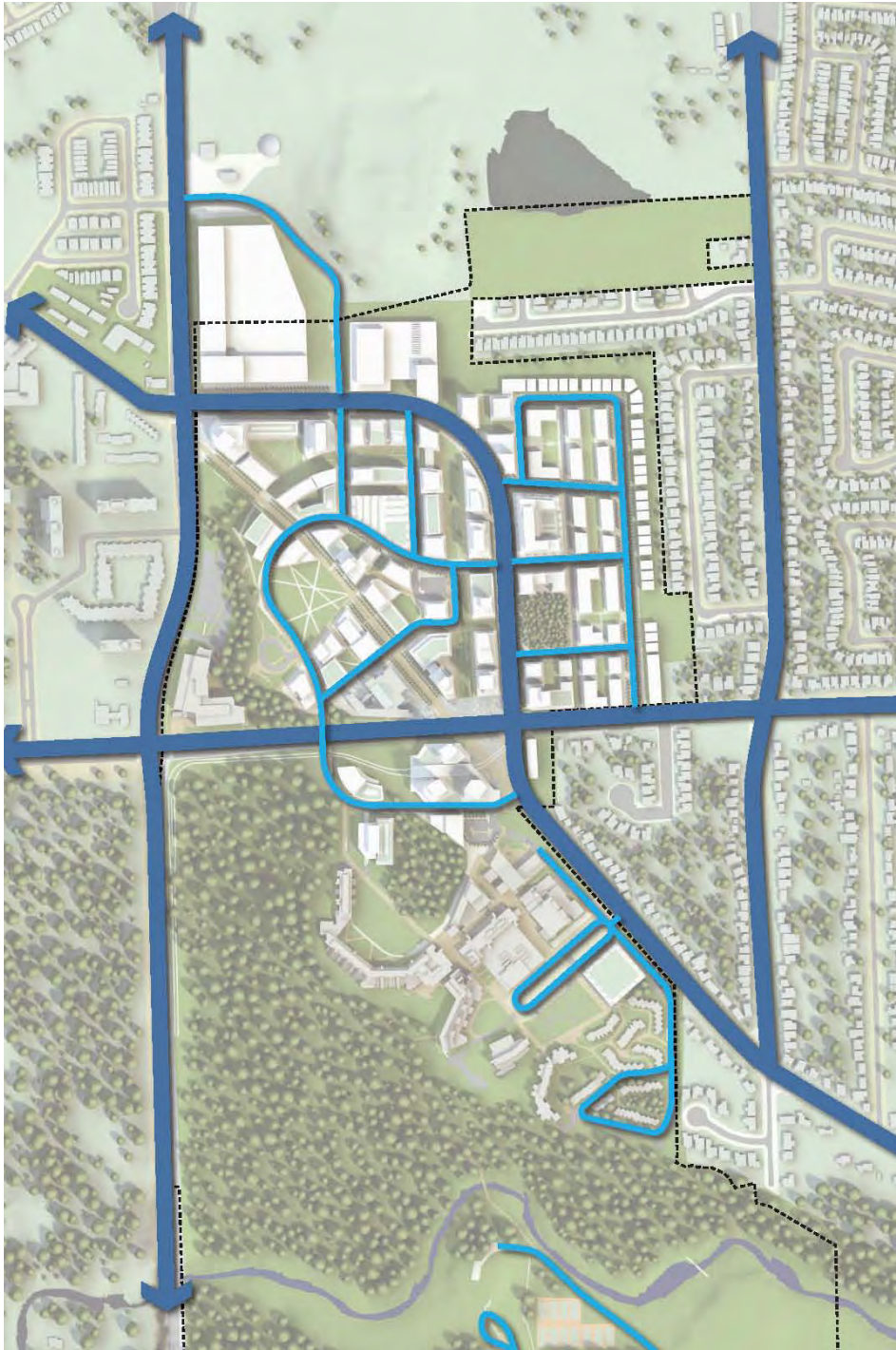


Figure 3.5: The modes of travel used to get to campus (modal split) indicate significant use of transit and other means of travel, in addition to the car. The future modal split will see significant growth in transit, walking and bicycling.



3.3.1 The Street Network

The street network is the foundation for movement on and to campus. Not only does it provide access for cars to campus, it establishes defined movement corridors for all types of mobility, including transit and service vehicles and even pedestrians and bicycles. This makes it an essential framework on which to base all of UTSC's movement networks.

Legend

- Major street
- Campus street/driveway

Figure 3.6: Campus street network

A complete, grid-like network of streets will enhance circulation, open space and accessibility on campus. The new Military Trail alignment establishes a long-term structure for campus growth on the North Campus while bringing circulation improvements and increased development potential to the South Campus.

Streets will be designed for people. Pedestrian travel will be given priority throughout campus, and the street network will absorb new infrastructure to support rapid transit. Cars and other vehicles will be accommodated as needed, but will operate in a manner that is appropriate for an urban and pedestrian-oriented university campus.

Beyond circulation, the street network is also the primary means by which the campus is viewed and experienced. In this way, UTSC's streets form a key component of the campus open space system in addition to moving people. This importance will be reflected in the high quality of the campus streetscapes and connectivity to other campus open spaces.



St. George Street, Toronto



3.3.2 Transit Systems

Transit will serve as the primary means for enhancing access to campus and will accommodate the majority of all travel growth to and from campus. Transit plans evolve and change over time to reflect changing priorities and long-term planning strategies. The current planned light rail transit route* through campus will provide a direct connection south to Kennedy subway station and north to the Sheppard rapid transit line and Sheppard subway. Planned bus rapid transit investments position UTSC on a route that will connect Durham Region through to Scarborough Town Centre.

Legend

- Rapid transit line
- Rapid transit stop
- - - Bus rapid transit line
- Local/regional bus stop

Figure 3.7: Planned rapid transit investments

Transit investments also provide opportunities to enhance the campus and implement placemaking improvements. Potential rapid transit investments are one of the catalysts for the Military Trail realignment that will create a new North Campus academic precinct. Rapid transit corridors will be the focus for streetscape improvements, including landscape investments and bicycle lanes.

Ensuring that transit is fully integrated into the campus environment will be essential to their success. Transit stops will serve as important hubs for the campus, and can accommodate a variety of active and public uses. Transit stops will seamlessly connect to the pedestrian and bicycle networks, and serve as the focal point for nearby building entrances. Barrier impacts must be minimized in the design of the Military Trail and Ellesmere rights of way to ensure a cohesive campus environment. All transit infrastructure will be appropriately designed with high quality materials to ensure fit within the campus environment.

Rapid transit decisions are planned and implemented over long periods of time.

*** Rapid transit decisions are planned and implemented over long planning periods. While light rail transit investments are currently being reconsidered, the Morningside/Ellesmere/Military Trail corridor will continue to be protected for rapid transit investment, whether light rail or bus rapid transit.**



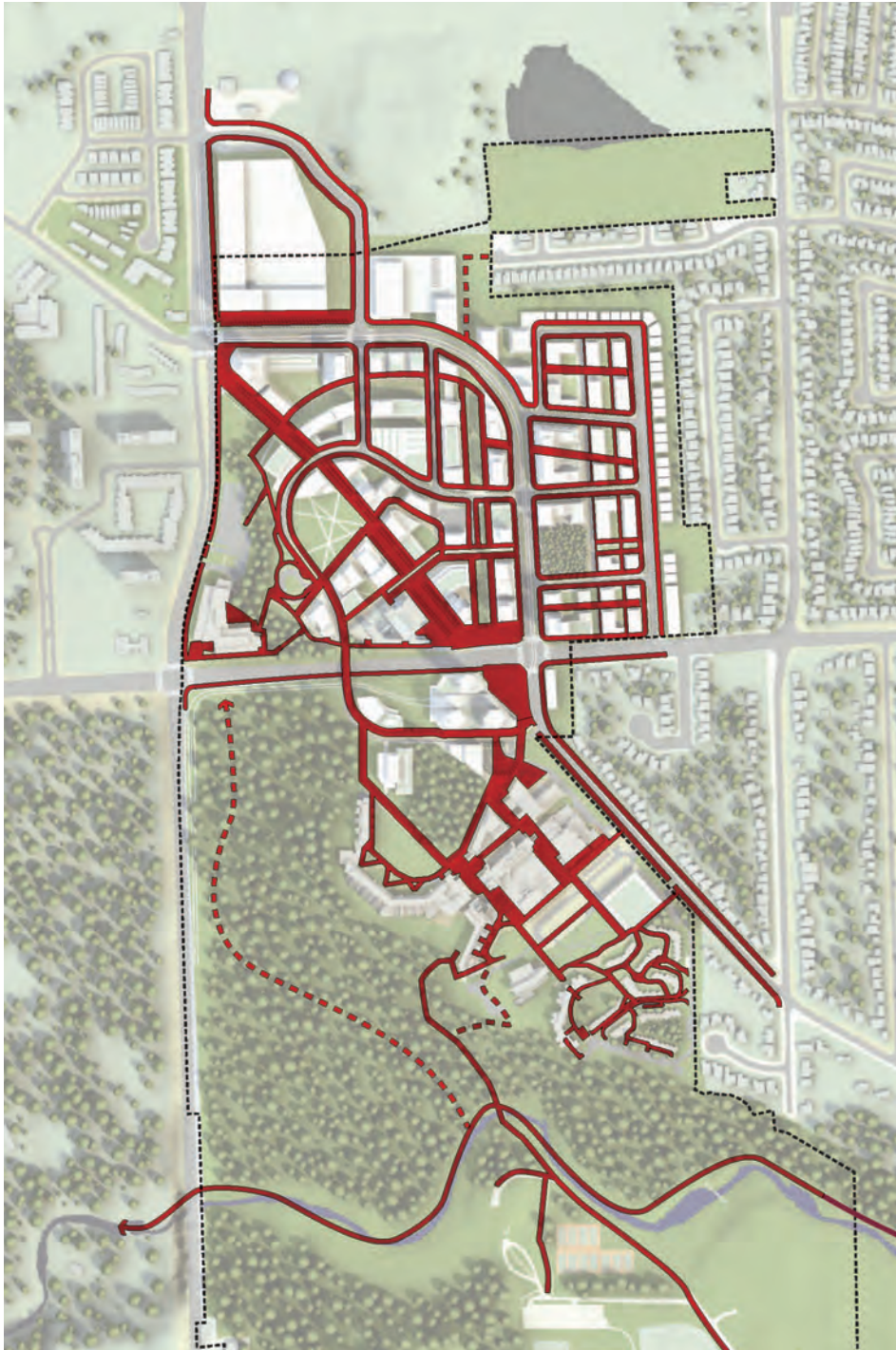
Weather-protected in-street transit stop (Sweden)



Weather-protected in-street transit stop (Dallas)



Integrated transit plaza (Portland State University)



3.3.3 The Pedestrian Network

The pedestrian network is the primary means for navigating and experiencing the campus. Along with the open space system, it plays an important role in accessing and experiencing the campus. With such an important role, the pedestrian network will be designed as a comprehensive system to provide universal access to all areas of campus.

Legend

- Pedestrian routes and spaces
- Potential future pedestrian route

Figure 3.8: Pedestrian sidewalks, paths and plazas

As the primary means of movement for all campus users, the pedestrian network will serve as the focal point for landscape initiatives and improvements. High quality design and materials will be applied throughout to ensure a cohesive network with a consistent image. At-grade pedestrian connections between buildings will be prioritized over below- and above-grade connections in order to support an active and vibrant campus.

The extensive and high quality pedestrian network of the South Campus will be mirrored on the North Campus, centred on the large plazas in the Campus Core and the Military Trail pedestrian spine. Pedestrian crossing will be streamlined at the intersection of Military Trail and Ellesmere Road, and a new pedestrian bridge will create increased porosity between the North and South Campuses. Enhanced and safe access to the ravine will support additional programming and use.



Locust Walk serves as an important pedestrian spine on the University of Pennsylvania campus



The Dundas Square pedestrian scramble (Toronto)

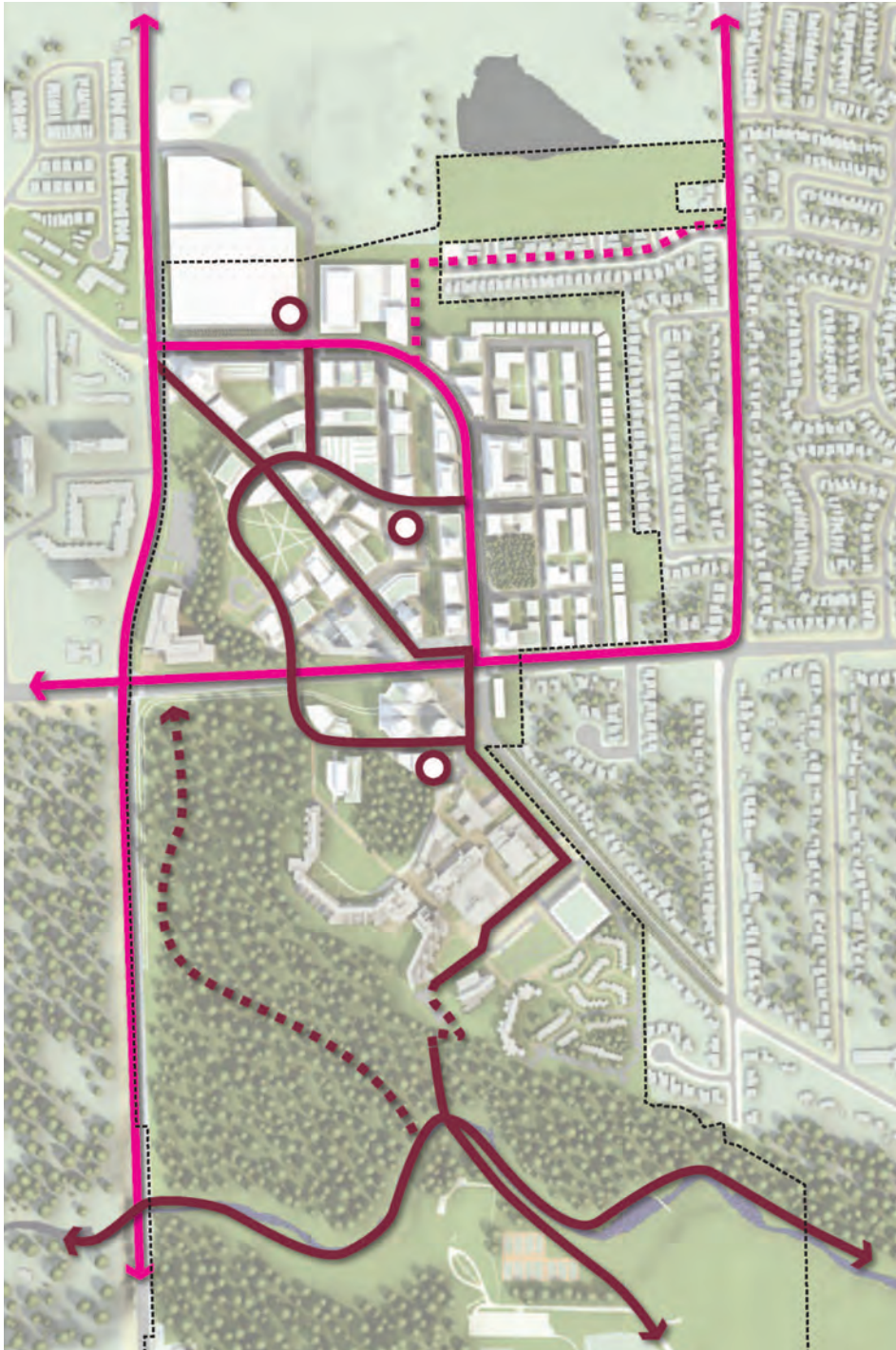


Figure 3.9: On and near campus bicycle routes and centralized bicycle parking facilities

3.3.4 The Bicycle Network

In recent years, cycling has grown rapidly as a viable means of sustainable urban transportation. To connect to surrounding communities, reduce vehicle parking requirements, and promote active and healthy transportation, UTSC will support bicycle access improvements to and within campus. Bicycle use will be accommodated and encouraged through an extensive network of cycling corridors, including dedicated bicycle lanes, shared travel lanes, multi-use paths and off-road trails.

Legend

- █ On-street bicycle lane
- █ Campus bicycle route
- - - Potential future bicycle route
- Major bicycle parking facility

Expansion and improvements to the bicycle network will ensure convenient bicycle access to and within campus. A comprehensive network of on campus bicycle routes will be implemented with new construction, primarily located on campus streets in shared and dedicated lanes.

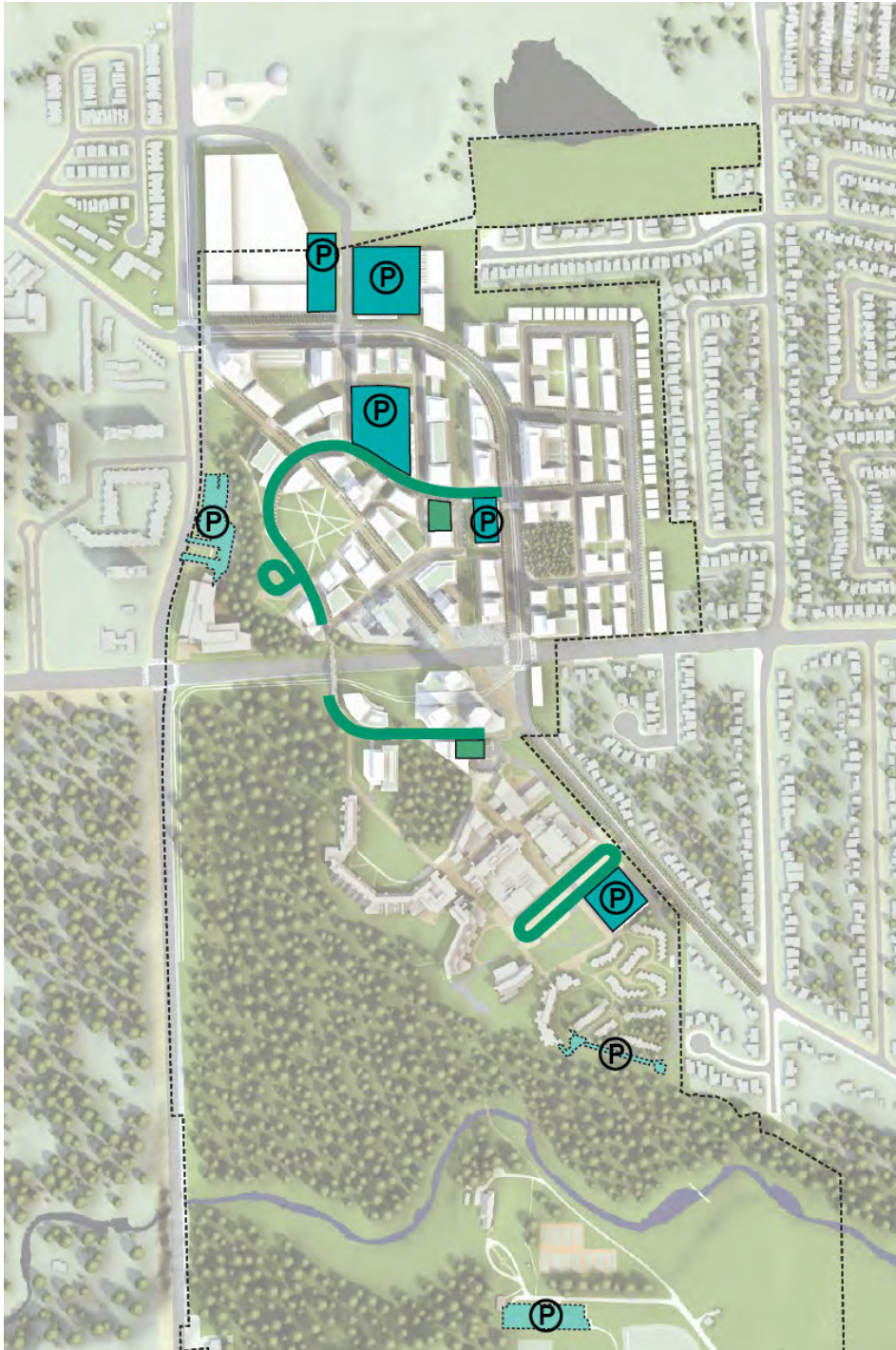
Beyond the campus boundaries, a variety of existing and planned trails will ensure UTSC's regional bicycle connectivity and create a comprehensive bicycle network in and around campus:

- The ravine's existing trail connections extend from west of UTSC through to Lake Ontario, where the Highland Creek trail meets the extensive Waterfront Trail. By enhancing bicycle access from the built campus to the ravine, UTSC will be directly connected to this larger network.
- Bicycle lanes are expected along all new rapid transit corridors. This will ensure bicycle connections along Morningside, Military Trail and Ellesmere in the area around the campus, connecting further to bicycle lanes along other rapid transit routes, such as Sheppard Avenue.
- Planned trail investments in the nearby Gatineau East electricity corridor will position UTSC along a new multi-use trail corridor that will extend from the Don Valley to the Rouge Valley. On-road connections will bring this trail to pass through the UTSC campus along Ellesmere Road, providing direct connections to the Highland Creek trail and other on-street bicycle lanes.

Bicycle support facilities will be critical to ensuring bicycle use. Safe and secure bicycle parking will be located conveniently throughout campus, supported by shower and change facilities in central locations. Three major bicycle parking facilities should be located in at central nodes on campus.



Covered bicycle parking (University of Chichester)



3.3.5 Parking, Servicing, and Pick-up/Drop-off

The North Campus parking lots are one of UTSC’s most visible assets, but represent a commuter campus legacy that will not continue into the future. With a shift in regional travel patterns and significant rapid transit investments, increased travel demand will be accommodated by more sustainable means of transportation, and parking demand is not expected to grow despite population growth. Large surface parking lots will slowly be replaced by new campus development, and parking supply will primarily be accommodated primarily in parking structures and below buildings.

Legend

- Potential location for a major parking structure
- Surface parking lot
- Pick-up/drop-off lot
- On-street pick-up/drop-off area

Figure 3.10: Campus parking facilities and pick-up/drop-off locations

This significant shift in parking facilities will require a change in parking management and planning. A large volume of parking can be accommodated in two large parking garages, one on the South Campus and one on the North Campus. Remaining parking needs will be accommodated in smaller structures, below buildings and in small, strategically located surface parking lots. The increased cost of parking supply will translate into higher parking fees for drivers, but will shift travel demand to more sustainable means of transportation.

With a large local population, carpooling and pick-up/drop-off will continue to be a viable means of travelling to UTSC. While pick-up/drop-off reduces parking requirements, it can lead to congestion and requires dedicated facilities. New pick-up/drop-off facilities will be located throughout campus to disperse localized impacts and provide increased options for drivers. Technological advances can improve the efficiency of these functions, such as cell phone lots, and an expanded internal circulation network will allow for more informal pick-up/drop-off activities on local streets throughout campus.

Like all active universities, the campus relies on efficient building servicing and deliveries to maintain academic activities and support the large campus population. While essential, these services should not impact the quality of the campus. To the extent possible, they should operate unnoticed in the background. Centralized receiving facilities, like the existing facility on the South Campus, will be used throughout the North Campus, and such facilities will be located, designed and landscaped to minimize impacts on the pedestrian-oriented campus environment.



A LEED certified parking structure (Santa Monica, CA)



Textured sidewalks provide physical cues for people with visual disabilities

3.3.6 Universal Accessibility

As a public institution with a diverse community of students, staff and faculty, UTSC is committed to ensuring universal accessibility throughout the campus environment. While the building code already establishes baseline requirements for the interior campus spaces, the university will aim to eliminate barriers that may prevent people with disabilities from engaging with the entire campus environment. This will include enhancements to address all types of accessibility issues to ensure the campus environment is truly welcoming.



3.4 Achieving Sustainable Systems

The future development and growth of UTSC's campus will be inherently sustainable. Compact, mixed use development will be supported by high quality rapid transit and enhanced pedestrian and bicycle connectivity. The Campus Core will serve as a high density, mixed-use centre for the university and surrounding community, providing retail, services and entertainment within walking distance of a large population. Diverse open spaces will provide relief from the built environment, and the large natural landscape of the ravine will continue to support biodiversity and carbon sequestration, in addition to research, teaching and other university activities.

To further support the campus's sustainability, the university will also ensure efficient operations and sustainable systems. Employing sustainable operations, the university will minimize contributions to climate change while reducing operating costs and enhancing the reliability and life-span of campus resources. Utilities and infrastructure will serve buildings efficiently and reliably without impacting the quality of campus. Water conservation efforts will minimize water use, and naturalized and on-site stormwater management features will maximize retention and treatment in a sustainable manner.

Facing the reality of climate change, the university will adopt a two-pronged response. Efforts will be made to minimize the university's greenhouse gas emissions. At the same time that measures will be taken to mitigate impacts associated with climate change.

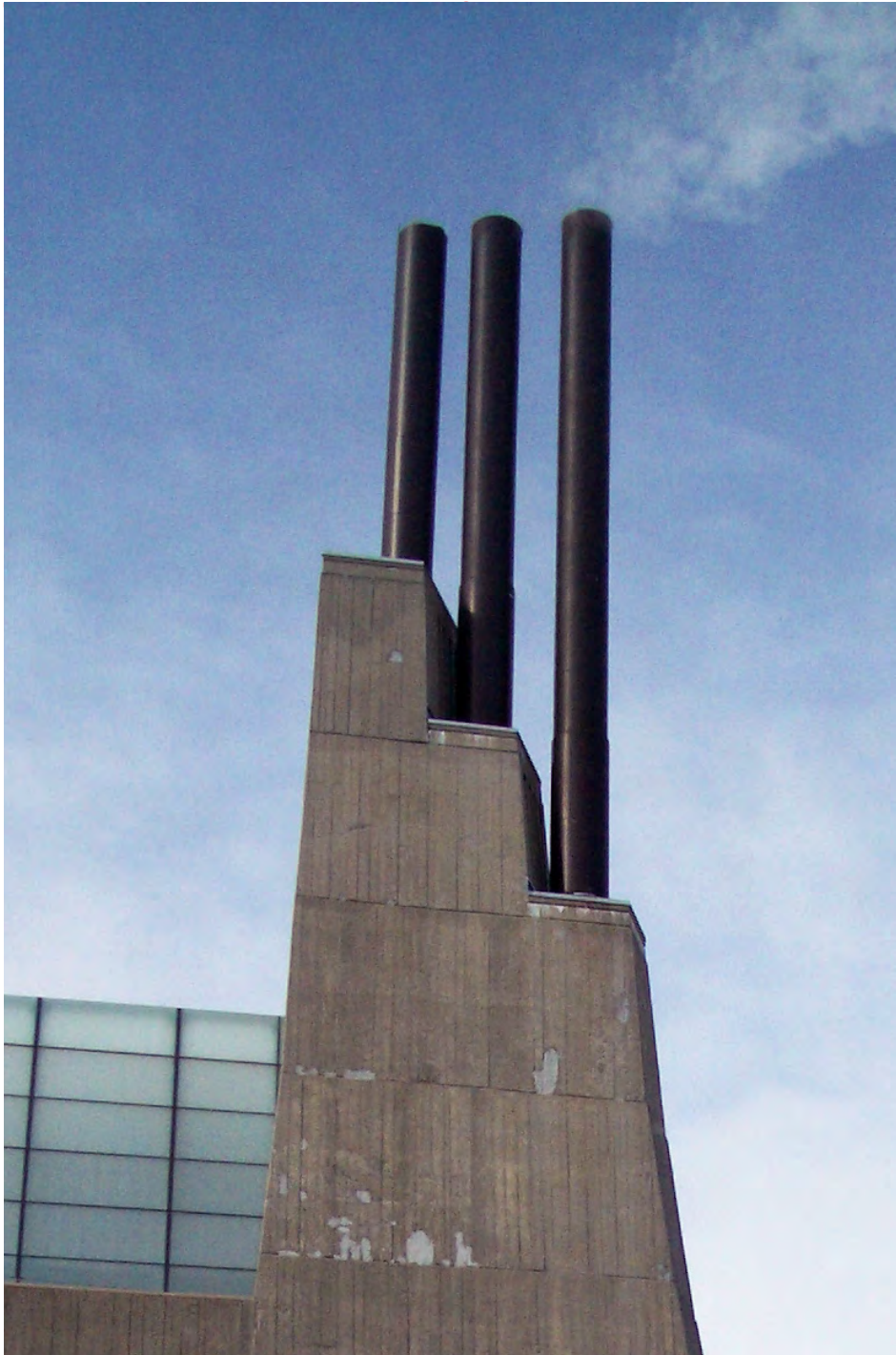


Figure 3.11: Infrastructure networks drawing

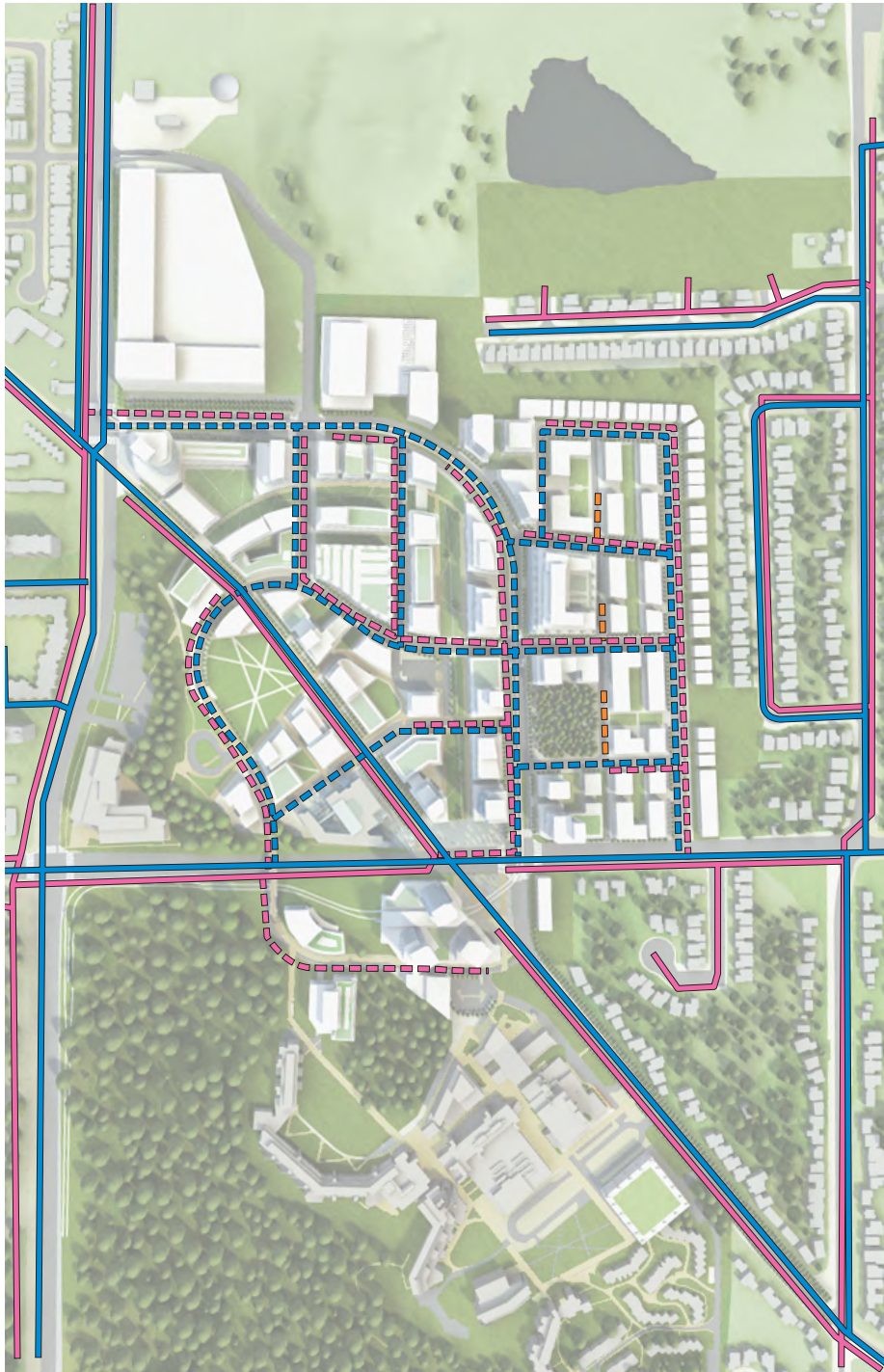
3.4.1 Infrastructure and Utilities

With a compact footprint of interconnected buildings, the South Campus is efficiently served by a district energy system. A central heating and cooling plant provides most of the HVAC needs for all of the academic buildings, ensuring efficiency, reliability and ability to retrofit for new technologies. The North Campus will benefit from a similar approach, employing a district energy system to serve most campus buildings.

A central system will be implemented on to accommodate campus growth in the near term. Significant infrastructure investments will be required early on to establish efficient distribution loops, and the system will be designed to allow for expansion as the campus, and subsequent energy demand, grows.

The following principles will guide the design and implementation of the North Campus district energy system:

- Design for capacity to provide for long-term growth
- Maximize system efficiency
- Ensure flexibility and adaptability to accommodate emerging technologies and new practices
- Build in redundancy to ensure uninterrupted service
- Allow for responsive to changing campus priorities
- Allow for incremental expansion
- Co-locate services to streamline networks and minimize disruption



3.4.2 Water and Stormwater Management

Enhancement of existing water and stormwater systems will be an important part of building the North Campus. Existing water, sewer and stormwater infrastructure has limited capacity, and major upgrades are required to expand networks and accommodate long-term campus growth. Many of these upgrades will have to occur early on to position the North Campus for new growth and development.

Sustainability and conservation will be a central theme for all water systems. Water conservation measures will be pursued to minimize water consumption and related costs. This will also reduce infrastructure requirements for both water and wastewater networks.

With changes in the city's approach to managing stormwater, a new approach to managing campus stormwater will be implemented. Stormwater flows will be addressed primarily on-site and on campus, rather than sent directly down the pipe. Innovative stormwater facilities will be explored to reduce stormwater volume, rate of outflow and pollutant load. These facilities could include such means as green roofs, small retention ponds, storage tanks, and other means. Stormwater management facilities that offer opportunities for landscaping and placemaking will be prioritized.

Legend

- Watermain (existing)
- - - Watermain (proposed)
- Sanitary and Storm Sewers (existing)
- - - Sanitary and Storm Sewers (proposed)
- - - Storm Sewers (proposed)

Figure 3.12: Water, sanitary and stormwater network enhancements



3.4.3 Climate Change

Climate change is a reality that will impact UTSC. As a large research and teaching institution, UTSC has a multi-part commitment to addressing climate change. From an academic perspective, existing ravine-based research at UTSC has already substantially to the understanding of climate change and its impacts. Ongoing teaching and research will further UTSC's contributions to understanding and addressing climate change.

In addition to its teaching and research mission, the university must also address climate change from a campus planning perspective. The university's response to climate change will reflect the policies of the UofT system and will address both reduction and mitigation. Campus operations and activities will be refined to minimize greenhouse gas reductions. At the same time, steps will be taken to mitigate negative impacts to the campus due to extreme weather events, increased temperature fluctuations and other impacts associated with climate change.





4. PLANNING RECOMMENDATIONS

This chapter outlines a series of planning recommendations to assist with implementation of the master plan. The planning directions elaborate on the master plan established in chapter 3 and correspond to the structure of chapter 3.

Chapter 4 - Planning Recommendations: Section 3.1 - Building the New Campus



Planning Recommendations: Section 3.1.1 - Ensuring Cohesive Academic Development

1. The area of the North Campus enclosed by the realigned Military Trail will be reserved primarily for academic development. This area will absorb most new academic growth, including teaching, research and support facilities.
2. Non-academic uses, including residential, commercial and partner industry development, may be developed along the edge of the North Campus academic precinct. These uses should be located in the Campus Core and along the realigned Military Trail.
3. The South Campus will continue to evolve as a highly landscaped and pedestrian-oriented academic precinct, and will see enhancement through:
 - a. Landscape and open space improvements;
 - b. Pedestrian connectivity improvements, including enhanced connections to the North Campus and the ravine; and
 - c. A structured parking garage to minimize surface parking needs.
4. The building footprint on the South Campus will continue to evolve to meet the changing needs of the university, including:
 - a. Infill development in the Campus Core and along Military Trail, including redevelopment of existing surface parking lots;

- b. Minor additions and renovations of existing buildings, provided they do not have adverse impact landscape, open space and circulation resources;
 - c. The original Science and Humanities Wings will be preserved as historic and functioning elements of the campus, but over time, laboratory and other 'heavy' uses may be replaced with less intensive, dry uses, such as classrooms, offices and study spaces; and
 - d. Redevelopment of the townhouses in the residential area to the south as they reach the end of their useful life.
5. Academic buildings will be designed and located to support the appropriate functioning of an integrated university campus, and that:
- a. Highly active academic uses, including classroom and teaching laboratory buildings, should be built in the Campus Core or along the realigned Military Trail;
 - b. Classroom buildings should be located to support fast and convenient class changes;
 - c. Classroom, teaching laboratories and other heavily used academic uses will be accommodated in the lower stories of buildings to ensure accessibility and accommodate large volumes of users;
 - d. Upper building stories will be reserved for office and other less intense uses; and
 - e. Where possible, adjacent buildings that accommodate related uses should be oriented to each other around a central open space.
6. To support a vibrant campus environment, above and below grade interior pedestrian connections between buildings should be avoided, except where they are necessary for research activities.
7. Academic buildings will be designed to be pedestrian oriented and contribute to a high quality campus. Front doors will be oriented to main pedestrian walkways and sites will be designed and constructed with high quality landscaping and open space improvements;
8. The cohesive and interrelated academic focus of the South and North Campuses will be enhanced through:
- a. Increased mobility connections, including intersection enhancements, a new bridge over Ellesmere Road and construction of new roads, bicycle routes and pedestrian paths;
 - b. Integrated landscape initiatives that cross Ellesmere Road; and
 - c. A concentration of active, mixed use development around the Campus Core.
9. Academic precincts and, where appropriate, academic buildings should be developed and programmed as inviting places for the surrounding community. Public-oriented university facilities should be accessible to the surrounding community, where appropriate.

Planning Recommendations:

Section 3.1.2 - Building the Campus Core

1. Campus Core buildings will support a mix of uses, including university and residential uses, and will also serve as the focus for arts, cultural, retail and other public uses. The Campus Core will serve as the home for:
 - a. A campus welcome centre to locate and orient visitors to campus, integrated with other uses;
 - b. A new performing arts centre, which will have public street frontage and will be highly visible and accessible to both the university and surrounding community.
2. Buildings constructed in the Campus Core will, at a minimum, accommodate retail and/or other public uses at grade. Where possible, public uses can also be accommodated above or below grade
3. Much of the Campus Core and surroundings will develop over the next 25 years, but the campus and surrounding population will have yet to reach its full potential. It will be important to incorporate active uses into Campus Core buildings in the early stages of campus development. Where current demand for such uses cannot yet be supported, ground level space should be designed with the flexibility to accommodate future demand for active uses.
4. The large development at the southwest corner of the intersection of Ellesmere and Military Trail should accommodate a variety of uses. In addition to academic uses, potential uses include an at-grade, interior transit station; student services and amenities to augment the existing Student Centre; and university residential uses.
5. As a focal point for the Campus Core, the transit station will be an important mobility hub for the campus and surrounding community. Building and landscape design should highlight the importance of this function and accommodate a large volume of users.
6. Connections between the North and South Campuses will be enhanced through better access and more cohesive design, including:
 - a. Redesigning the intersection of Ellesmere and the new Military Trail to minimize crossing distances and ensure convenient crossing;
 - b. Creating a continuous landscape treatment across the intersection to link the North and South Campuses;
 - c. Ensuring development setbacks adjacent to the intersection to support the creation of large pedestrian plazas on both the North and South Campuses; and
 - d. Constructing a bridge across Ellesmere, just east of Centennial College, to provide a second at-grade crossing between the North and South Campuses.
7. As the focal point for the university and the public interface of the campus with the surrounding community, Campus Core facility and landscape investments should serve as a showcase for UTSC.

Planning Recommendations:

Section 3.1.3 - Providing Diverse Housing Options

1. Where feasible, the university will support the development of a range of housing types on campus that will serve undergraduate and graduate students, staff, faculty and, if feasible, market housing.
2. Campus residential development, including student housing, should follow a self-funding model. However, the university may engage in a wide range of funding and partnership opportunities to ensure effective delivery of desired housing options.
3. Campus residential development will take the following form:
 - a. The Campus Core may accommodate mid-rise and high-rise residential developments;
 - b. The residential area in the southeast portion of the South Campus will continue to support residential development in both mid-rise and low-rise form, and redevelopment should respond to the low-rise character of the neighbourhood to the southeast;
 - c. The eastern portion of the North Campus may accommodate ground-related low-rise residential development, with decreased development densities adjacent to the existing residential neighbourhood to provide a buffer from other university uses; and
 - d. Areas adjacent to the North Campus athletics precinct may accommodate mid-rise development, with some high-rise development, including hotel uses, immediately adjacent to the intersection of Morningside and Military Trail.
4. Undergraduate student housing will be accommodated primarily in mid-rise and high-rise buildings, and will not be located adjacent to the residential community in the eastern portion of the North Campus.
5. Graduate, graduate family, faculty, staff and non-university housing will be accommodated primarily in ground-related housing.
6. To ensure the development of a cohesive campus and to maintain a campus-like setting throughout UTSC's lands, all residential developments will be linked to academic, mixed use and other uses. Linkages may include pedestrian and open space connections, similar material palette, and, where appropriate, integrated uses.
7. A variety of supportive uses, amenities and resources should be provided in the Campus Core to ensure the effective development of a university residential community, including such uses as grocery and convenience stores, restaurants and cafes and other local services and retailers.

Planning Recommendations:

Section 3.1.4 - Supporting Athletic Opportunities

1. Athletic and recreation fields and facilities on the North Campus should be designed and located to integrate with the anticipated park on the landfill mound and with other athletic and recreational uses on City lands to the north.
2. New indoor athletic facilities on the North Campus, such as covered sports fields and ice rinks, should be designed and located to:
 - a. Ensure close proximity to the planned aquatic centre and field house;
 - b. Provide direct and convenient connections to nearby outdoor facilities; and
 - c. Allow for climate controlled pedestrian connections between adjacent facilities, where possible and appropriate.
3. Access to the aquatics centre and field house will be prioritized by:
 - a. Implementing landscape improvements along the existing Military Trail to support pedestrian travel and minimize perceived distances;
 - b. Providing appropriate pedestrian, bicycle and vehicular facilities and parking; and
 - c. Ensuring convenient and accessible transit connections from the South Campus.

4. The ravine will continue to support a variety of field-based athletic and recreation uses. Access and connectivity to the South and North Campuses will be enhanced, including direct access to athletic facilities centred around the aquatic centre and field house. Due to flooding and maintenance concerns, the tennis courts in the ravine may eventually be relocated.
5. In the long term, the aquatics centre and field house will become the main campus athletic facilities, which will allow the South Campus Athletics Centre to be redeveloped for other purposes.
6. Access to and connectivity between athletic facilities will be maximized by:
 - a. Integrating facilities into on- and off-campus pedestrian and bicycle networks;
 - b. Providing appropriate bicycle and vehicular parking facilities;
 - c. Ensuring direct and convenient community access to public facilities; and
 - d. Providing a direct pedestrian and bicycle route to the athletic facilities in the ravine.

**Planning Recommendations:
Section 3.1.5 - Engaging in Partnership
Development**

1. The university will attract and encourage partnership developments on the North Campus. Partnership developments will:
 - a. Primarily consist of high density office employment uses located along the realigned Military Trail and in the Campus Core;
 - b. Include active and public uses at grade and be developed consistent with built form and design guidelines identified in this plan; and
 - c. Where appropriate, support opportunities for academic integration.
2. The university should encourage relationships with industries and the growth of the university by:
 - a. Supporting and encouraging the development of incubator space for university-related and other start-up industries; and
 - b. Encouraging inclusion of academic spaces within partnership buildings.
3. On-campus facilities and services should be developed to support partnership developments and their interrelationships with the university, including:
 - a. A highly visible and public co-op centre on the North Campus; and
 - b. Retail and service uses in the Campus Core that provide business support.

**Planning Recommendations:
Section 3.1.6 - Supporting Re-use of the
City Lands**

1. Provide and maintain direct pedestrian and vehicular connections to the City lands to the north. Detailed pedestrian, bicycle, transit and vehicular network planning and design should consider the North Campus and City lands as a single unit to ensure cohesive and complete networks.
2. Support the development of parks, recreation and athletics uses on the City lands and adjacent to the planned aquatics centre, including:
 - a. Parkland and naturalized areas on the landfill mound and surrounding areas; and
 - b. Sports fields and facilities on level areas of the City lands.
3. When planning for growth and development on the North Campus, consider the long-term potential for higher density commercial, office or other uses on the City lands, including impacts on:
 - a. Infrastructure systems, such as water, sewer and storm water; and
 - b. Transportation systems, including pedestrian, bicycle, transit and vehicular.
4. Engage in regular communication with City staff to ensure ongoing consultation with respect to planning for the City lands.
5. The area of campus north of Chartway Boulevard will be reserved for future development and should be planned and developed in coordination with the City Lands.

Chapter 4 - Planning Recommendations:

Section 3.2 - Enhancing the Open Space Network



Planning Recommendations:

Section 3.2.1 - Extending the Pattern of Landscape and Wayfinding

1. A long-term landscape master plan and design guidelines should be developed to ensure high quality design and a consistent campus experience throughout the South Campus, the North Campus and the ravine. Design guidelines will be developed to ensure consistency in landscape treatment by establishing universal standards for such things as materials, vegetation, street furniture and other landscape considerations.
2. With further development on the North Campus, landscape plans should be developed for each street block or precinct of development to optimize the design and distribution of campus open space.
3. Landscape treatment will play an important role in knitting together the South Campus, the North Campus and the ravine, as well as surrounding communities. Special attention will be paid to landscape design at the edges of these distinct areas to ensure cohesion.
4. The comprehensive network of pedestrian paths will be highly landscaped and consistent in design. Localized landscape initiatives will connect to and complement the pedestrian path network.
5. Pedestrian paths and open spaces shall be designed to draw the surrounding community members into the campus. Primary pedestrian entrances to campus will be treated as important gateways through landscaping and other means.

6. Recent landscape enhancement projects on the South Campus will continue to be implemented throughout the remaining South Campus open space network to enhance the overall quality of the existing campus environment.
7. Publicly accessible components of the open space network will support a wide variety of university and community users.
 - a. Landscaped areas will support outdoor gathering through the use of high quality street furniture and appropriate landscape treatment.
 - b. Landscape design will consider four season use by minimizing adverse impacts from winter weather and rain, where possible and appropriate.
 - c. Highly public and heavily trafficked areas can serve as a focal point for public art and other landscape investments.
 - d. A new park will be constructed on the eastern edge of the North Campus in conjunction with new residential development, and will be shared with the adjacent community.



Figure 4.1: The campus open space network

Legend

- Major pedestrian corridors and plazas
- Major campus open spaces
- Courtyards and interstitial spaces
- Natural features
- Major linkages
- Military Trail

Planning Recommendations: Section 3.2.3 - Enhancing and Reconnecting the Ravine

1. Use of the ravine should be maximized for low-impact academic activities and research, including outdoor laboratories and field research, outdoor teaching spaces, and pilot sites for habitat restoration and other environmentally beneficial activities.
2. The university should work with City staff, TRCA staff and other relevant stakeholders to develop an environmental management strategy for the university ravine lands and natural heritage resources. The management plan should be coordinated with management of adjacent open spaces (e.g. Morningside Park and the City lands on the North Campus), and should address:
 - a. Guidelines for outdoor research and teaching activities;
 - b. Habitat protection, restoration and expansion;
 - c. Access to and through the ravine; and
 - d. Low-impact recreational opportunities.
3. Where appropriate, new low-impact athletic and recreational activities and facilities may be introduced to the ravine lands.
4. The university should work with City and TRCA staff to enhance trail resources in the ravine, including:
 - a. Ensuring existing trail resources are paved and well maintained;
 - b. Establishing a paved multi-use trail from the ravine to the South Campus that supports bicycle access and does not require stairs; and
 - c. Establishing a multi-use trail from the ravine to an area near the intersection of Morningside Avenue and Ellesmere Road to connect the ravine trail network with the planned Ellesmere bicycle route, the East Gateau trail system and Centennial College.
5. A strategy should be developed to extend the natural landscape and environmental features and functions of the ravine onto the tablelands of the North and South Campuses. This may include top of bank naturalization, naturalization of stormwater facilities, management of existing naturalized areas and integration of natural features into campus landscapes.

Planning Recommendations: Section 3.3.4 - Protecting Natural Heritage

1. A comprehensive natural heritage study should be prepared for the campus which will:
 - a. Fulfill the natural heritage requirements for preparation of a City of Toronto secondary plan for the area;
 - b. Identify a strategy to ensure enhancement of the natural heritage system through the long-term implementation of the master plan; and
 - c. Identify means for the protection of natural heritage resources in new construction and campus development.
2. Planning and design of new campus landscapes, as well as enhancements to existing landscapes, will consider opportunities to complement, enhance and provide connectivity between natural heritage resources, where appropriate.
3. Landscapes and open space near the ravine and top of bank will be designed to integrate with and complement the natural heritage features and functions of the ravine landscape.
 - a. Views from the campus to the ravine should be preserved and enhanced.
 - b. Buildings and landscapes should be designed together to frame views and create an inviting approach to the ravine.
 - c. Decisions regarding planting materials and landscape design should consider the ravine

landscape, including opportunities to protect and enhance features and functions.

4. The ravine is the heart of UTSC's natural heritage resources and will continue to be protected, enhanced and utilized, including:
 - a. Continuing to protect the habitat and biodiversity of the ravine, and enhancing connectivity with other natural heritage features;
 - b. Promoting the ravine as a living laboratory for non-invasive environmental research; and
 - c. Partnering with the TRCA and City to study, monitor and enhance the quality of the Highland Creek streambed and riparian area, with priority placed on bank stabilization and naturalization measures.
5. Pedestrian and cyclists use of the ravine trail system will be encouraged by:
 - a. Ensuring high quality trails consistent with the adjacent and connected city trail system;
 - b. Ensuring appropriate signage and wayfinding throughout the ravine trails;
 - c. Providing direct connections to uses and activities in the ravine; and
 - d. Ensuring trails are designed for safety and security, including the potential to accommodate light service vehicles for maintenance and emergency access.
6. Consider the implementation of a long-term, large-scale landscape enhancement program in the ravine, such as the development of a botanical garden or the renaturalization of significant portions of the riparian and floodplain area.
7. Natural and programmatic connectivity to adjacent city-owned ravine lands will be enhanced, including:
 - a. Using major public infrastructure investments to achieve natural heritage and trail enhancements in the ravine;
 - b. Ensuring open space connections through to the city lands north of the campus; and
 - c. Playing an active role in the planning for the city lands to the north to ensure mutually beneficial outcomes.

Chapter 4 - Planning Recommendations: Section 3.3 - Ensuring Mobility



Planning Recommendations: Section 3.3.1 - The Street Network

1. All streets will be designed to municipal standards and will:
 - a. Accommodate a range of mobility options, including private vehicles, transit, bicycles and pedestrians;
 - b. Contribute to the high quality, pedestrian-oriented open space network;
 - c. Ensure a cohesive and unified campus street network; and
 - d. Provide simple and effective wayfinding and orientation throughout campus.
2. The realigned Military Trail will accommodate the highest traffic volumes and be the primary street for accessing and servicing the campus. It will be designed to accommodate rapid transit, travel lanes, bicycle lanes and wide, landscaped sidewalks.
3. The university will ensure that campus streets are calm and safe for pedestrians. This may be achieved by:
 - a. Restricting access during periods of heavy pedestrian activity, such as class changes;
 - b. Implementing traffic calming measures, including speed humps and tables, curb bulb-outs, planting strips and other traffic calming measures;

- c. Considering the implementation of ‘naked streets’, where all curbs, signs and other markings are removed to prioritize pedestrian activity; and
 - d. Locating parking structures and other high traffic destinations at the edges of campus or along arterial roads to minimize traffic on local and campus roads.
4. The street network will be designed to accommodate transit vehicles where appropriate, including:
 - a. Potential light rail or rapid transit;
 - b. Planned bus rapid transit line on Ellesmere Road; and
 - c. Local and regional transit buses, which may circulate through internal campus streets subject to University and transit authority agreement.
 5. A comprehensive signage and wayfinding strategy will be implemented to provide clear direction to and through campus and to minimize impacts from unnecessary vehicular circulation. Wayfinding measures shall be designed to provide early direction to campus, including clear signage from the major approaches to the university, such as Highway 401, Morningside Avenue and Ellesmere Road.

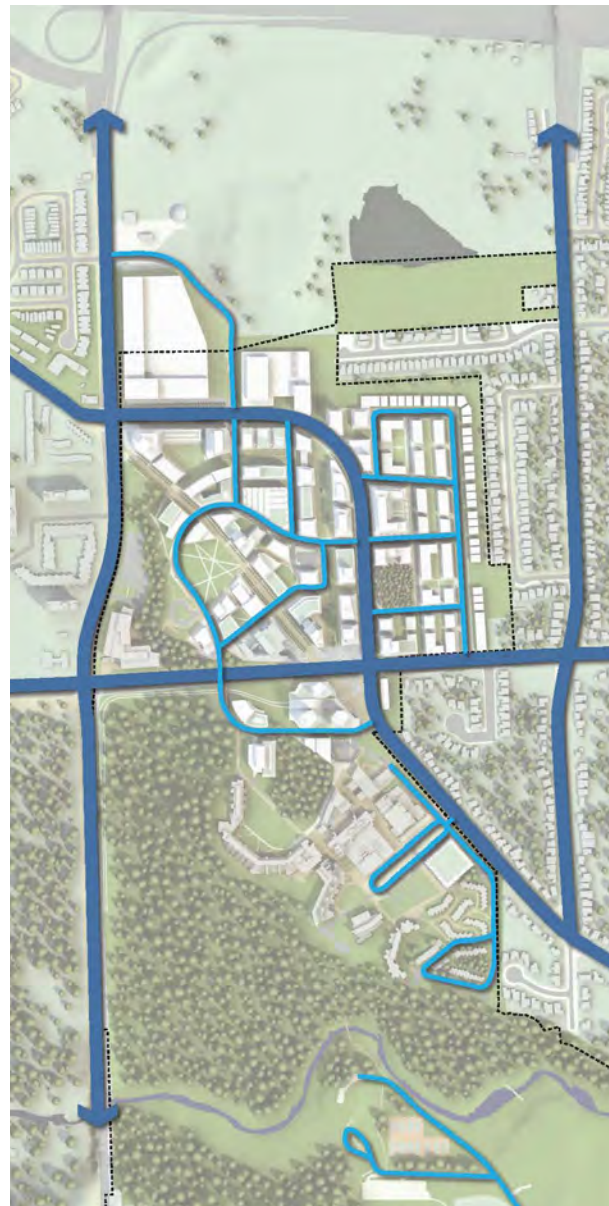


Figure 4.1: Campus street network

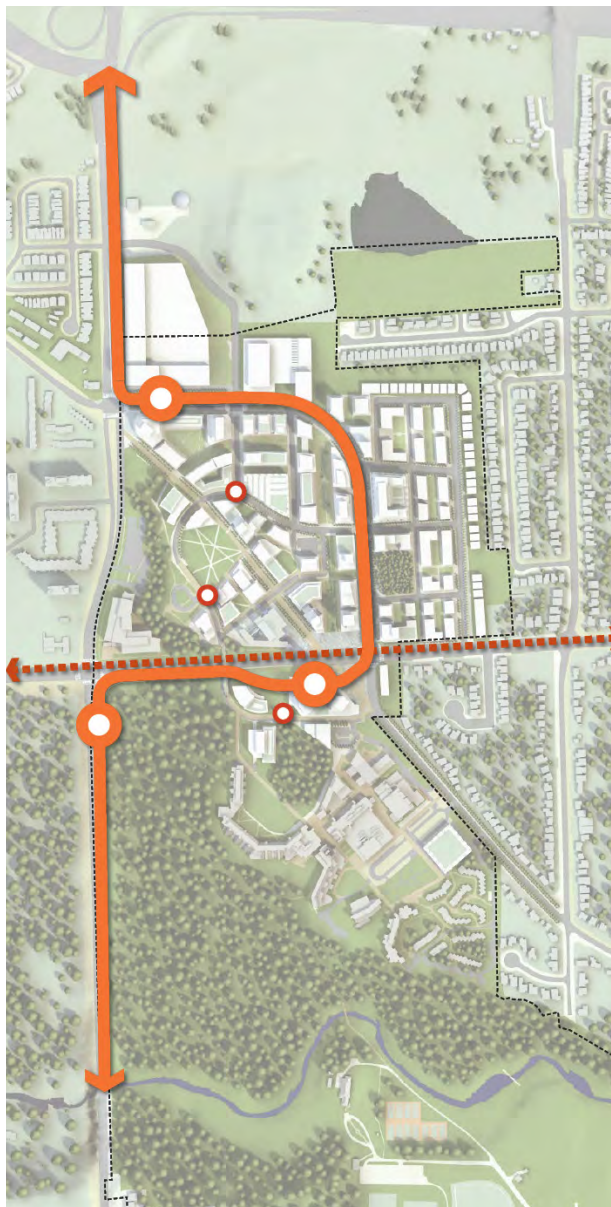
Legend

- Major streets
- Campus streets and driveways

Planning Recommendations:

Section 3.3.2 - Transit Systems

1. Transit service, including light rail transit, bus rapid transit, regional bus and local bus service, will be prioritized as the preferred mode of travel to and from campus.
2. The potential rapid transit route through campus will play an important role in both the campus movement system and the campus development framework. The university will support early implementation of rapid transit into the campus.
3. The university will support early implementation of the planned bus rapid transit (BRT) route from Durham to Scarborough Town Centre. To minimize crossing distances and ensure connectivity between the North and South Campuses, Metrolinx and other stakeholders should be engaged early on to ensure the planned bus rapid transit route will operate in mixed traffic in the vicinity of the campus.
4. The university will work with the university community and regional transit providers to implement transit access and fare improvements. Implementation of a universal transit pass, which will provide access to all local and regional transit services, will be a priority.
5. A transit station will be located in the Campus Core, accommodated within a larger mixed-use building, and will:
 - a. Serve as the centre for transit service to and through campus;
 - b. Accommodate transfers between rapid and local transit; and
 - c. Provide climate-controlled waiting areas for rapid transit passengers.
6. The rapid transit stop south of the planned aquatics centre and field house will provide direct access to this important facility and other planned uses in this area of campus. The transit stop should be designed to minimize perceived distances across Military Trail and to integrate with the planned pedestrian plaza along the southern frontage of the aquatic centre and field house.
7. Bus-based transit stops will be dispersed throughout the road network immediately surrounding the Campus Core.
 - a. The Durham BRT stops should be located on both sides of Ellesmere Road immediately north of the Campus Core transit station.
 - b. Local and regional bus stops will be located along the internal campus street system on both the North and South Campuses.
8. The campus will be a destination for many transit routes and will accommodate a large volume of transit users. However, the campus transit network will not be designed as a major transit hub and will not serve as a major transfer point for transit users not destined for the campus.
9. To support convenient and accessible transit use, transit stops will be integrated into the campus and pedestrian networks through such means as:
 - a. Locating transit stops along major pedestrian corridors and in close proximity to active retail and service uses and major activity hubs;
 - b. Providing seamless access between major activity hubs and transit stops;
 - c. Prioritizing pedestrian access to in-road rapid transit stops;
 - d. Ensuring high quality design and landscaping for all transit stops and related infrastructure; and
 - e. Incorporating real-time transit information technology throughout campus.
10. Transit infrastructure and operations should be carefully planned in order to minimize:
 - a. Conflicts between transit vehicles and pedestrian activity;
 - b. Barrier conditions across Ellesmere Road and Military Trail due to transit stop design;
 - c. Air quality impacts due to idling transit vehicles; and
 - d. Other adverse impacts from transit.



Legend

- Rapid transit line
- Rapid transit station
- - - Bus rapid transit line
- Transit stops

Figure 4.2: Planned rapid transit investments

**Planning Recommendations:
Section 3.3.3 - The Pedestrian Network**

1. The campus will be linked by an accessible, safe, convenient and comfortable pedestrian network that will ensure full campus connectivity. Pedestrians will be able to safely travel from the ravine through to the North Campus, with strong links beyond to neighbouring communities and the city lands to the north.
 - a. Sidewalks will be designed as safe, attractive and interesting public spaces, and will accommodate a large number of users through wide sidewalk widths, benches and seating areas, and hardscaped areas.
 - b. Sidewalks will provide direct, convenient and universally accessible connections to building entrances, public open spaces, transit stops, parking and pick-up/drop-off areas, and other important destinations.
 - c. The pedestrian network will be design to ensure efficient and direct connections to minimize pedestrian travel time.
 - d. Clear direction and signage will be provided for pedestrians and cyclists.
2. The pedestrian network will be primary means from which campus buildings and open spaces will be accessed and experienced.
 - a. Primary building entrances will be oriented to pedestrian routes.

- b. All public entrances, amenity areas and outdoor public spaces will be grade-related and accessible.
 - c. Hardscaped plazas shall be provided at all building entrances to accommodate anticipated users.
3. Pedestrian mobility, convenience and safety will be prioritized.
- a. Pedestrian areas will be designed to minimize vehicular-pedestrian conflicts, including minimizing curb cuts throughout campus.
 - b. Pedestrian level wind impacts will be minimized along streets, building entrances and open spaces.
 - c. Direct and convenient pedestrian connections will be accommodated during construction.
 - d. All new development projects will include pedestrian and bicycle access plans in design submissions.
 - e. Pedestrian priority will be established in street crossings through design, signal light timing and other means.
 - f. Bicycling will be discouraged on high volume pedestrian paths.
 - g. Outdoor lighting along sidewalks, buildings and streets will be designed primarily for pedestrian safety.
4. Direct and convenient pedestrian connections will be established to areas surrounding the campus to ensure a permeable and urban campus experience. Sidewalks, landscaped open space and other pedestrian infrastructure will be directly connected to adjacent off-campus sidewalk and trail networks to ensure seamless connectivity, including connections to city streets and sidewalks, the planned Gatineau East Bikeway and the Highland Creek trail system.
5. Weather protection for pedestrians will be prioritized.
- a. Building entrances should be designed with canopies and other protective measures;
 - b. Adjacent buildings should be designed so that entrances are aligned to minimize travel distance; and
 - c. Landscape design should consider weather protection, where appropriate.
6. The current Military Trail alignment on the North Campus will be repurposed as a primary pedestrian spine. The Military Trail pedestrian walk will be designed to:
- a. Contain wide, continuous hardscaped areas to accommodate significant pedestrian volumes and outdoor events;
 - b. Showcase high quality landscape treatment, including materials, street furniture, planting materials, etc.;
- c. Accommodate significant landscape improvements, including distinct materials, street furniture, planting materials and other means;
 - d. Provide seating opportunities along its entire length; and
 - e. Retain clear sight lines along the entire length of the pedestrianized Military Trail to maintain the historic trail right of way.
7. An 'accessible by all' approach to the pedestrian network will ensure universal accessibility throughout the campus environment. Exterior pedestrian spaces, including hardscaped areas, building entrances and, where feasible, pedestrian paths, will be designed for accessibility.
8. The university will develop a strategy to implement significant and pedestrian network improvement projects, including:
- a. Ensuring the pedestrian route between the ARC and the Athletics Centre connects through to the Student Centre;
 - b. Working with the TRCA and City to construct a safe and convenient trail from the South Campus down into the ravine that does not require stairways; and
 - c. Constructing the Ellesmere Road bridge in concert with the rapid transit investments and Military Trail realignment.

9. Pedestrian level signage and wayfinding will provide clear and effective direction for accessing and getting around campus.
 - a. Signage and wayfinding will be designed to ensure consistency across campus and will be designed to appropriately fit with the campus setting. Consideration will be made to ensure appropriate colour, size, materials and lighting.
 - b. Building signage will be provided around primary entrances and oriented toward pedestrian routes.

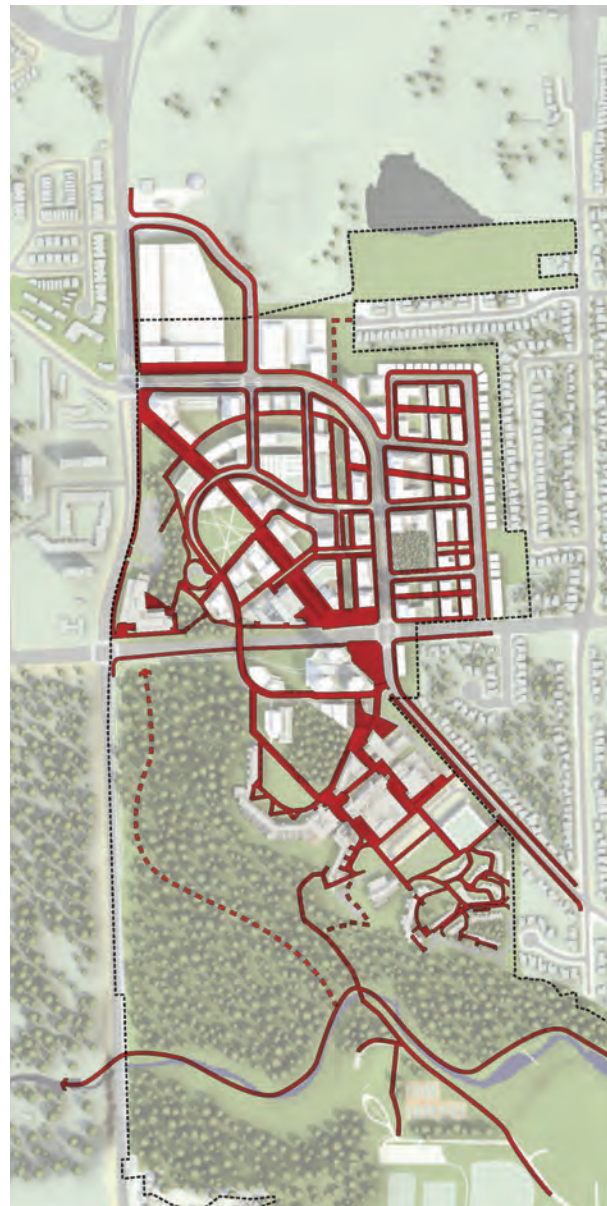


Figure 4.3: Pedestrian sidewalks, paths and plazas

Planning Recommendations: Section 3.3.4 - The Bicycle Network

1. The university will support bicycle use by implement bicycle lanes and multi-use trails and sidewalks throughout campus, as indicated in Figure 4.4.
2. Seamless access will be provided to adjacent off-campus bicycle routes, and the university will advocate for and work toward providing regional bicycle route connections, including:
 - a. Implementation of the planned East Gatineau Trail through campus;
 - b. Development of a bicycle accessible multi-use trail from the Highland Creek trail up to the South Campus;
 - c. The potential development of a multi-use trail connecting the Highland Creek trail through to planned bicycle lanes at the intersection of Morningside and Military Trail;
 - d. Implementation of bicycle trails in conjunction with planned rapid transit investments; and
 - e. Identification and resolution of bicycle access and connectivity issues to nearby community resources.
3. Bicycle use and accessibility will be prioritized by:
 - a. Ensuring bicycle routes are prioritized for snow clearing in winter;
 - b. Providing bicycle troughs on any outdoor stairs that form part of the pedestrian network; and
 - c. Generally eliminating barriers to bicycle use.

4. The university will advocate for inclusion in future municipal bicycle sharing programs, with multiple bicycle sharing stations in convenient on-campus locations. In the absence of a municipal program, the university may investigate options for a campus bicycle sharing program.
5. Safe and convenient bicycle parking will be provided located in highly visible and active areas, in close proximity to primary building entrances.
 - a. Bicycle parking should be located to provide direct and convenient access to bicycle lanes and travel routes.
 - b. Three major bicycle parking facilities will be provided, as identified in figure 4.4, and will be designed to ensure safety, provide weather protection and accommodate future bike share facilities.
 - c. The provision of indoor or weather protected bicycle parking facilities should be considered in all new developments. All City of Toronto bicycle parking requirements will be exceeded.
 - d. Shower and change facilities should be provided for cyclists in convenient locations, including at existing and planned athletics facilities and academic facilities with high levels of activity or population.

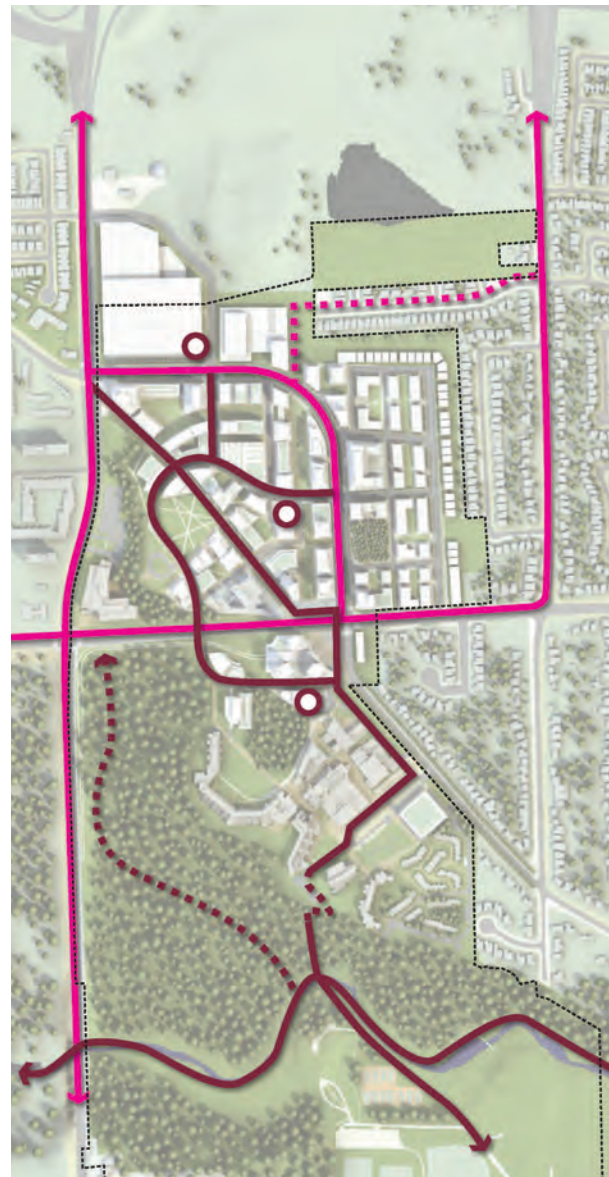


Figure 4.4: On and near campus bicycle routes and centralized bicycle parking facilities

Legend

- On-street bicycle lanes
- Campus bicycle route
- - - Potential future bicycle route
- Major bicycle parking facility





Planning Recommendations:

Section 3.3.5 - Parking, Servicing, and Pick-up/Drop-off

1. Adequate on-campus parking facilities will continue to be provided to ensure parking needs are met.
 - a. Student, staff and faculty parking areas will be located throughout the North and South Campuses to ensure efficient distribution of parking.
 - b. With increased development on the North Campus, surface parking lots will be incrementally redistributed to the edges of campus.
 - c. Parking facilities should generally be located at the periphery of campus to reduce through-travel.
 - d. A travel demand management (TDM) program will be developed to minimize single-occupant trips to campus, and may include establishing a TDM coordinator position to promote and educate students and staff on sustainable transportation options.
2. Over time, most existing surface parking spaces will be replaced with structured parking, as indicated on Figure 4.5. In the long-term, parking will be distributed throughout campus in:
 - a. Two large above-grade parking structures, one of each on the South Campus and the North Campus;
 - b. Below-grade parking structures under buildings;
 - c. Smaller above grade parking structures; and
 - d. Convenience surface lots and on-street parking to meet short-term and high priority needs.
3. Visitor and short-term parking will be strategically provided throughout campus, including in the Campus Core, to ensure convenient access to campus, create a welcoming environment and support retail and other activities. Visitor parking should be highly visible and accessible, and may include on-street metered parking.
4. A comprehensive parking strategy will be developed to define long-term funding mechanisms for structured parking. Partnership opportunities may provide alternatives for building and operating campus parking infrastructure.
5. Surface parking areas shall be designed and landscaped as high quality open spaces, and that landscape treatment should:
 - a. Screen parking areas from views;
 - b. Break up large parking areas into smaller lots;
 - c. Maximize shade to reduce heat island effects; and
 - d. Ensure the provision of safe, convenient, accessible and highly landscaped pedestrian travel routes to surface parking areas.
6. Above-grade parking structures will be designed to minimize impacts to the campus environment, and will:
 - a. Be wrapped with other uses;
 - b. Be integrated with other uses and buildings, and located behind such uses to hide the parking structure from the street;
 - c. Incorporate active uses at grade along building frontages; and
 - d. Potentially accommodate a portion of parking levels below grade.
7. Driveways and access points for surface parking lots, structured parking facilities, pick-up and drop-off areas, and building servicing facilities should be carefully designed to minimize visual impacts and reduce the potential for pedestrian and vehicular conflicts.
8. Pick-up and drop-off activity will be directed to appropriate locations, as identified on figure 4.5, and that:
 - a. Pick-up and drop-off activity should be dispersed throughout the campus to reduce congestion, but located near activity centres and campus focal points to ensure effectiveness; and
 - b. Cell phone parking lots may be used to reduce congestion caused by vehicles waiting to pick up passengers.
9. Pick-up and drop-off areas and bus loading areas will be designed as important public and pedestrian-oriented spaces, and will be located

in highly visible locations. These areas will be designed to minimize adverse impacts and disruptions to the pedestrian network.

10. Building servicing facilities, including loading docks, delivery areas and waste management facilities, will be designed to minimize visual and operational impacts to the campus environment. Servicing facilities will:
 - a. Be centralized within building clusters and quads to avoid redundant facilities and activities and to minimize vehicular access points;
 - b. Be located below grade, where feasible; and
 - c. Be appropriately landscaped to minimize visual impacts.
11. The planning and use of service access roads should be coordinated with pedestrian routes to minimize conflict. Where feasible, servicing should be restricted during periods of heavy pedestrian activity.

- Legend**
- Major parking structure 
 - Surface parking lot 
 - Pick-up/drop-off lot 
 - On-street pick-up/drop-off 

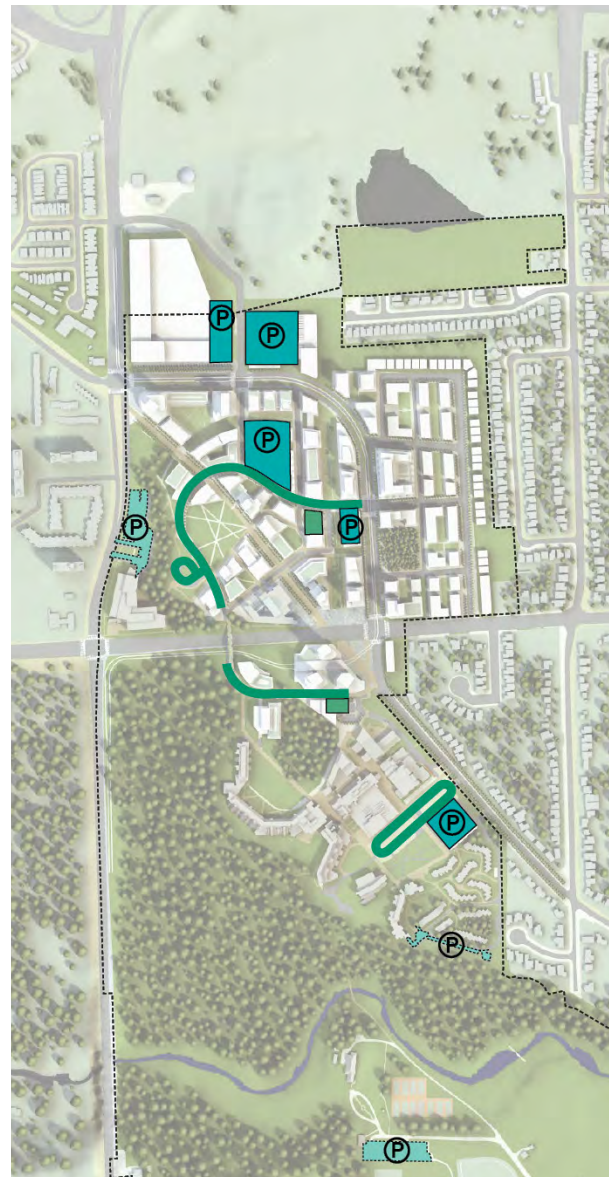


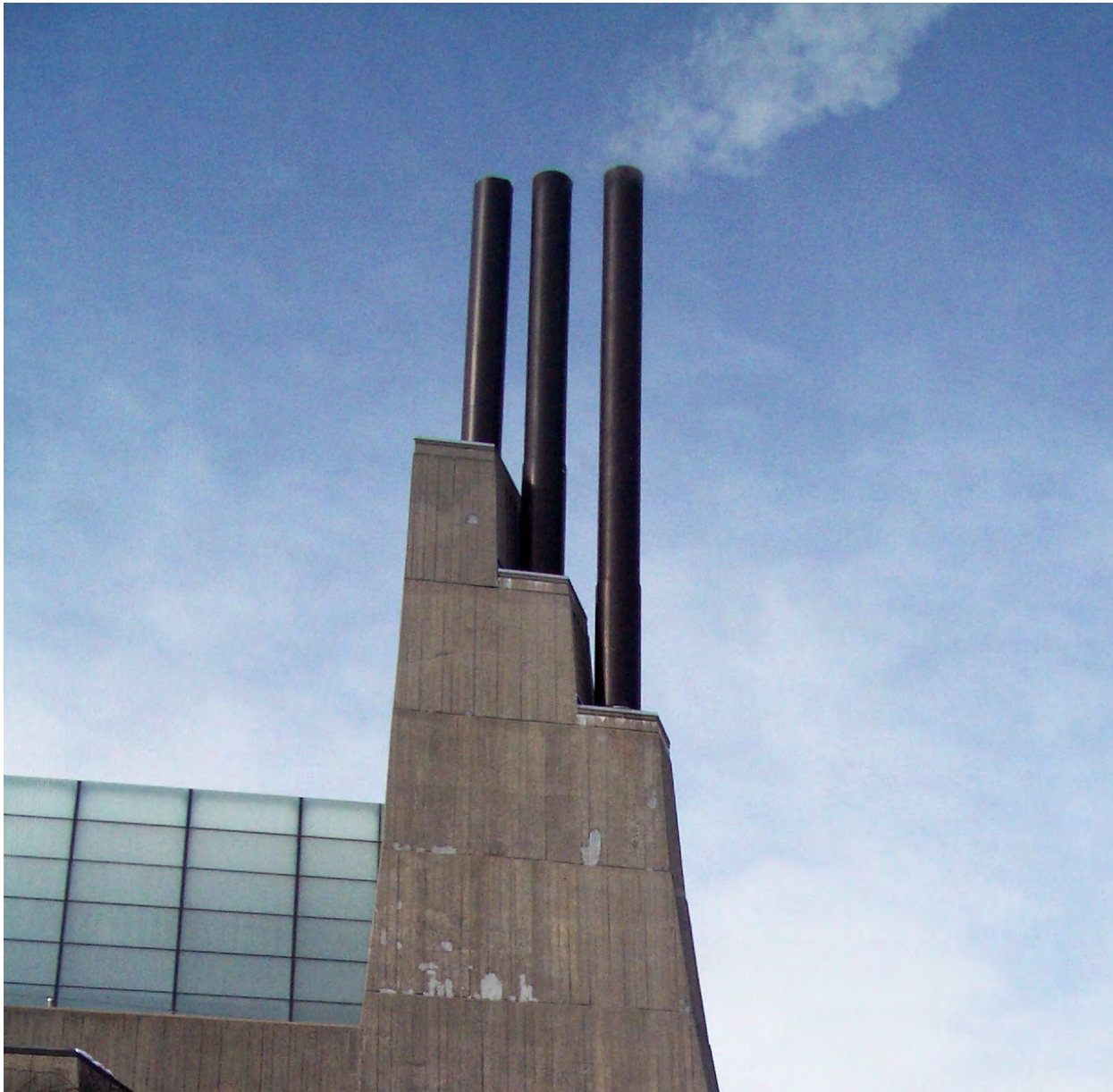
Figure 4.5: Campus parking facilities and pick-up/drop-off locations

Planning Recommendations: Section 3.3.6 - Universal Accessibility

1. All campus buildings will be designed to be universally accessible and will implement the City of Toronto Accessibility Design Guidelines.
2. Municipal and Provincial accessibility guidelines and legislation will be implemented throughout the campus environment to ensure universal accessibility in sidewalks, open spaces and other areas of campus.
3. The campus pedestrian network and open space system should target universal accessibility through an 'accessible by all' approach. Specific attention should be paid to sidewalk and path design, including sidewalk width, curb cuts, the interface with public streets, paving materials and simplicity in use.
4. The university will work to identify strategies to ensure direct access to the ravine for people with disabilities.

Chapter 4 - Planning Recommendations:

Section 3.4 - Achieving Sustainable Systems



Planning Recommendations: Section 3.4.1 - Infrastructure and Utilities

1. Below-grade infrastructure and utility networks will be located in street rights of way and confirmed open spaces to minimize conflicts with new developments. Where feasible and appropriate, infrastructure, utilities and other services should be located in shared tunnels and/or conduits.
2. A district energy system will be established on the North Campus to serve all major academic and partnership buildings. The university will plan for a large up-front investment to support early implementation of this system. To maximize benefits, the district energy system could be co-located with the aquatics centre and potential future ice rinks to provide opportunities for energy sharing and co-generation.
3. Utility infrastructure will be located below grade, where feasible. Where necessary, above-grade infrastructure will be designed to minimize adverse aesthetic impacts through screening, landscaping or other means.
4. New buildings will be designed to the highest standards of energy and water efficiency. Existing buildings will be retrofitted over time to increase campus efficiency. Additional building design guidelines, including guidelines related to sustainability, are identified in section 5.2.

Planning Recommendations: Section 3.4.2 - Water and Stormwater Management

5. A campus-wide strategy for voice and data networks should be identified early on to ensure adequate and efficient provision of service throughout the campus. Opportunities for future system upgrades should be protected.
1. Water, wastewater and stormwater infrastructure systems will be upgraded over time to accommodate future growth and development, as indicated in figure .
2. All new buildings and facilities will be designed for water conservation by incorporating low-flow fixtures and appliances and by ensuring large volume uses operate in off-peak hours.
3. Decisions regarding landscape design and vegetation should consider the long-term impacts from irrigation and water use. Drought tolerant species and lawn-alternatives are preferred.
4. Greywater systems will be explored in a variety of settings and buildings to treat and reuse relatively clean waste water. Greywater collection systems can be utilized to support uses such as flush toilets and landscape irrigation. Stormwater retention systems can also be incorporated with greywater systems to maximize water reuse.
5. On-site retention and treatment of stormwater will be implemented in all new development, and that:
 - a. Stormwater management can use available land resources for stormwater management, including the ravine;
 - b. Green roofs will be implemented in accordance with City of Toronto by-laws;
 - c. The university will strive to exceed city guidelines and standards for stormwater management; and
 - d. Reuse of stormwater for irrigation and other purposes should be considered.
6. Precinct-based stormwater management strategies should be developed for entire blocks prior to any development to ensure that long-term stormwater needs are addressed without impacting adjacent development sites.
7. Naturalized stormwater management facilities, such as artificial wetlands and small-scale settling ponds, are preferred where they can contribute to campus landscapes. Intensive facilities that do not reduce the total developable area of campus will be preferred.
8. Landscape design and construction practices should support stormwater management, including permeable paving materials, naturalized landscaping, use of swales/ponds/wetlands, green roofs and other means.

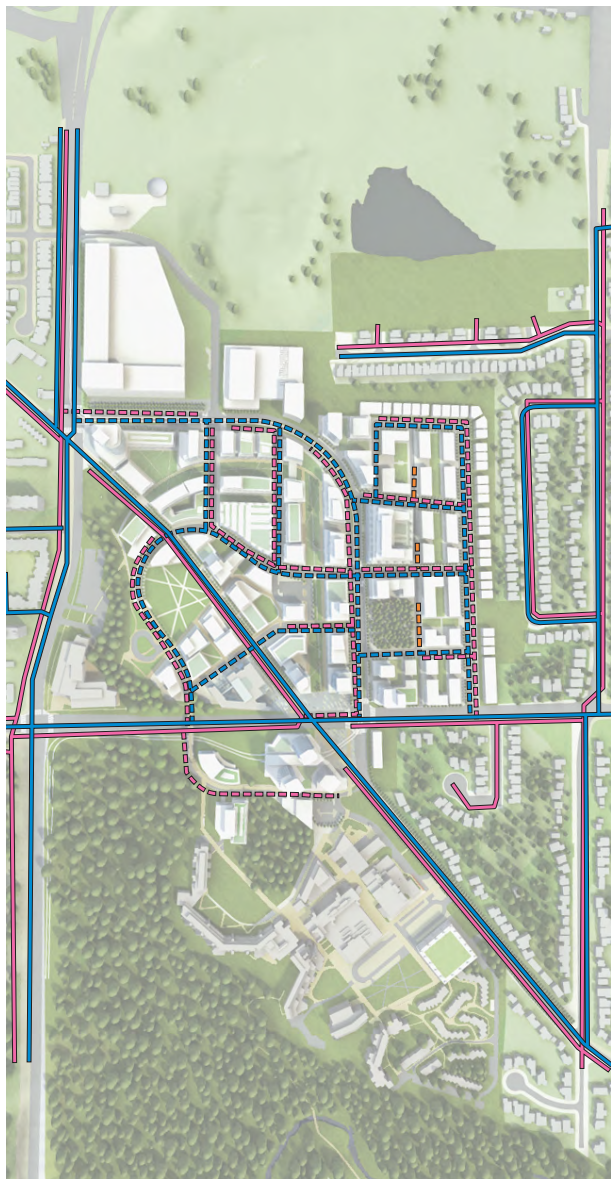


Figure 4.6: Water, sanitary and stormwater network enhancements

Legend

- Watermain (existing)
- - - Watermain (proposed)
- Sanitary and Storm Sewers (existing)
- - - Sanitary and Storm Sewers (proposed)
- - - Storm Sewers (proposed)

Planning Recommendations: Section 3.4.3 - Climate Change

1. A campus climate change plan should be developed in order to:
 - a. Identify past, current and project greenhouse gas emissions;
 - b. Establish short- and long-term targets for emission reductions; and
 - c. Identify opportunities and strategies to ensure targets are met.
2. Campus design, development and operations will be planned to minimize greenhouse gas emissions, including:
 - a. Ensuring that buildings and landscapes minimize energy consumption;
 - b. Providing efficient building energy systems, services and infrastructure;
 - c. Using alternative energy sources for campus buildings and campus fleet vehicles; and
 - d. Maximizing transit use and other alternatives to car travel.
3. Opportunities for on-site alternative energy generation should be explored, including rooftop solar, wind energy and other means.
4. The university should undertake a climate change risk assessment to understand potential impacts from climate change. Potential campus-specific risk areas include Highland Creek flooding and natural heritage impacts from invasive species and changing vegetation.

5. A climate change mitigation strategy should be developed to address risk areas, which may include the following actions:
 - a. Consider potential flooding impacts on activities and facilities in the Highland Creek floodplain; and
 - b. Designing campus landscapes to adapt to a changing climate through such means as using naturalized landscapes, using of resilient vegetation and other means.





5. IMPLEMENTATION

The master plan provides a comprehensive and integrated physical and policy framework for future campus development. This section describes how the campus master plan can be implemented over time. Guidance regarding development phasing and integration provide further detail for near-term developments and decisions around the Campus Core. The building design guidelines provide design direction for campus developments to ensure buildings meet the needs of the university and integrate with the campus environment. A series of recommended municipal planning policies are also proposed to ensure the master plan is effectively incorporated into the City of Toronto planning framework.



5.1 Development Phasing & Integration

The master plan projects a bold new future for UTSC that is remarkably different from the campus today. This type of change cannot happen overnight. Implementation of the master plan will take decades. The future may also bring unexpected opportunities and challenges never contemplated in the development of the master plan. While the plan's development framework provides significant flexibility for new development, future change is inevitable. This section provides a general framework and set of guidelines for implementing the plan and responding to future change.

Long-term campus growth is based on a series of transportation, open space and infrastructure investments. These investments together establish the overall master plan development framework, which will allow the full build-out of campus.

Significant investment will be required to establish transportation and infrastructure systems and networks, including the realignment of Military Trail, municipal infrastructure improvements and district energy systems. Other investments include the transition to structured parking and the creation of smaller open spaces.

The primary structuring element of future campus growth is the realignment of Military Trail. Uncertainty regarding the timing of transit improvements and the realignment of Military Trail pose a potential short-term road block for the full realization of the master plan. However, university growth cannot be halted, and the master plan ensures flexibility for this. Given the pattern and trajectory of campus development, short-term campus growth will likely occur in and around the Campus Core. Some of this growth can occur in advance of major infrastructure investments, such as the Military Trail realignment, ensuring that the university can continue to meet pressing development needs prior to identifying funding opportunities for major infrastructure investments.

Full build-out of the future campus will likely extend beyond the next 50 years. However, the next few decades will see significant build-out of many of the key features of campus.

The following directions will guide implementation of the master plan

1. In the short term, academic growth and the build-out of the Campus Core can be undertaken prior to the realignment of Military Trail. Building frontages, primary entrances and other site planning considerations should be designed based on a realigned Military Trail.
2. If transit investments do not materialize in the short-term, the realignment of Military Trail must proceed forward to unlock the full potential of the North Campus for development. At such a times, the details of the street right-of-way can be determined, including whether to protect for a transit corridor in the centre of the street. If protected, a transit corridor could be temporarily landscaped or could potentially accommodate bus-based transit and transit stops.
3. Space for retail and other mixed uses should be built in the Campus Core to support the needs of the future campus population and anticipated demand for mixed uses in the Campus Core. At grade space can be designed for flexibility to accommodate a range of uses in the short-term that can change over time as need arises.
4. The building design guidelines identified in section 5.2 will be applied to all campus developments, including partnership, residential and other developments where the university is not the primary developer.
5. Surface parking lots lost to development cannot be entirely replaced with additional surface parking areas further out from the Campus Core. Some parking must be replaced in parking structures and below buildings. A parking investment strategy should be developed to determine appropriate funding mechanisms for structured or below-grade parking lots.
6. The university should continue to lobby all levels of government for transit investments that benefit travel to campus, including proposed light rail transit and bus rapid transit from Durham Region.
7. Permanent and temporary buildings cannot be located in future infrastructure corridors, open spaces or campus streets. Where a development is proposed in one of these areas where it may impact the campus structure, a comprehensive master plan review must be undertaken to determine the appropriateness of the proposal.
8. The University of Toronto Board of Governors must be consulted prior to major changes to the campus structure. Changes of this nature must be accompanied by a comprehensive master plan review.

9. While this master plan provides a development framework for the full build-out of the campus over the next 50 years and beyond, figure 5.1 illustrates the interim potential campus build-out over the next three decades. While this interim plan suggests that a large portion of the North Campus will remain undeveloped for a long period of time, the overall campus structure is in place, including the Campus Core, the realigned Military Trail and the major campus landscape initiatives.



Figure 5.1: Potential interim build-out of the master plan



Figure 5.2: Proposed full campus build-out of the master plan

	GROSS FLOOR AREA (m ²)	
	Interim Build-Out	Full Build-Out
University	145,356	223,423
Residential	75,653	122,874
Partnership	3,421	77,000
Athletic	44,550	44,550
Structured	1,000	2,400
Parking spaces		
TOTAL AREA	268,980	467,847

Table 5.1: UTSC development potential - interim and full campus build-out



Instructional Centre (Rendering: Diamond + Schmitt)

5.2 Building Design Guidelines

The following building design guidelines provide direction for all new development on campus. The intent is to provide high quality buildings that respond to the campus setting and follow a cohesive pattern of campus growth.

1. Buildings will be well designed and made from high quality materials.
 - a. All building facades will be designed with visually distinctive materials and massing, consistent with high quality architecture exemplified on the UTSC campus.
 - b. High quality and durable building materials will be used to maximize building lifespan.
2. The highest standards of architecture, landscape and urban design, and construction will be employed to create safe, attractive, interesting and comfortable spaces for building users and pedestrians.
 - a. Exterior areas and building facades will be appropriately landscaped to soften building size and massing, enhance the streetscape and create transition from public to private realm.
 - b. Highly landscaped public amenity spaces and pedestrian areas will be designed to accommodate a variety of activities, to promote pedestrian safety and a safe walking and cycling environment, and to assist in mitigating seasonal weather.
3. Buildings will be designed to conform to the Toronto Official Plan policies, particularly those in Chapter 3 relating to the Public Realm and Built Form, and will implement City of Toronto standards, guidelines and policies relating to design.
4. The location and orientation of buildings will consider integration with future development in the surrounding vicinity. Consideration will be given to pedestrian access, views and shared building resources, such as landscaped open space and servicing facilities.
5. New buildings will be designed as a model for sustainability and green development to reduce environmental impacts.
 - a. The building design will implement the Tier 1 and Tier 2 standards of the City of Toronto Green Standard.
 - b. Green roof requirements and targets established in the City of Toronto Green Standard should be implemented. Roofs should also be designed to accommodate small-scale green energy infrastructure, including solar hot water.
6. The City's Streetscape Manual and UTSC landscape standards, including standards and guidelines related to lighting (including the City of Toronto Bird Friendly Guidelines), sidewalk design, planting and other landscape elements, will be implemented.

The building design guidelines provide design direction for campus developments to ensure buildings meet the needs of the university and integrate with the campus environment.

- Remaining roof area should be designed to reflect solar energy.
- c. The building will be designed to implement the City of Toronto Bird Friendly Development Guidelines, including ensuring appropriate treatment of glass and reflective surfaces to minimize bird collisions. Exterior building and landscape lighting will be designed to minimize upward and spill lighting.
 - d. When designing the HVAC and heating systems, consideration should be given to integration with a campus energy plant and district energy distribution system.
6. Buildings will be designed to implement and showcase green development practices to reduce environmental impacts. Buildings will meet City of Toronto standards for green development, bird friendly design and other appropriate design guidelines.
 7. Buildings with large floorplates should be designed to provide visual interest and break up the building massing to reduce the perceived size of the building. Exterior walls should be articulated and varied through stepbacks, varied facades and visual/materials changes, and blank walls along street frontages will be avoided.
 - a. Transparent glazing should be maximized at and above grade.
 - b. Roofs should exhibit varied heights and materials to create variation and support green roofs.
 - c. Parking and servicing, storage uses, and other uses that do not require transparent glazing should be located below grade to minimize building size.
 8. The massing of buildings should reflect a human scale, including a low-rise podium, where appropriate, at-grade glazing and active uses, appropriate landscaping and adequate street furniture and exterior hardscaped areas.
 9. Building entrances shall be designed to be highly visible and directly accessible for pedestrians.
 - a. Entrances will be designed as a focal point for the building frontage through the use of varying heights, changes to material palette, signage and other means.
 - b. Weather protection in the form of canopies or other appropriate means will be provided at and around primary pedestrian entrances, in outdoor spaces with high pedestrian volumes, in transit waiting areas, and covering connections between the primary building and any associated structures.
 10. Service access will be situated and designed to reduce the impact of the vehicles and activities while providing safe and convenient access. Loading and servicing facilities should be screened from view through landscaping or other means and should be located below grade to reduce visual impacts and minimize disruption to the building facade.
 11. Parking and service entrances to buildings should be located away from building frontages and screened from view to minimize physical and visual disruptions.
 12. Mechanical equipment and other building systems will be designed to minimize visual impact and protect the design integrity of the building.
 - a. Mechanical equipment should be located below-grade. If located on the roof, it should be screened and/or enclosed to minimize noise and visual impacts.
 - b. Visual impacts from at-grade substations, transformers, telephone boxes and other similar equipment should be minimized by integrating into the interior of the building or by integrating into the design of the exterior of the building through landscaping or other means. Communication with utility providers should be initiated early in the design process for all new buildings.
 13. All major developments and major campus landscape initiatives will be reviewed by the University of Toronto Design Review Committee.



5.3 Municipal Approvals

The following proposed policies are recommended for inclusion in a City of Toronto Secondary Plan and Zoning By-law amendment to support the implementation of the University of Toronto Scarborough master plan. While a variety of studies and consultation events were carried out in the planning process, a comprehensive natural heritage assessment was not undertaken. Upon application for municipal approvals, the university may be required to undertake such an assessment to secure planning approvals.

5.3.1 Proposed Secondary Plan Policies

Major Objectives

- To provide for the long-term growth and evolution of UTSC, particularly in the North Campus area, comprised of the university-owned lands north of Ellesmere Road.
- To permit a wide range of uses for the university and surrounding community within a network of streets, sidewalks, open spaces and development blocks.
- To make the university a community node through the development of a mixed use centre.
- To ensure and support integration with the surrounding community.
- To ensure a high quality public realm for university and other users, including high quality open spaces and good urban design.
- To protect, connect and enhance the ravine and natural heritage resources.
- To realign Military Trail to create a single North Campus block of land for use by UTSC that is not interrupted by a major public roadway.

Land Use

- Land use designations are permitted in accordance with figure 5.1.
- Academic uses will be located in both the North and South Campus areas to ensure the development of a cohesive academic campus.
- Mixed uses will be permitted and encouraged in the Campus Core and along Military Trail in the North Campus to provide academic, office, residential, retail, service and entertainment uses for the university campus and surrounding community.
- Development of non-university uses will be encouraged, except in those areas designated for academic uses only.
- A variety of residential uses will be encouraged on the campus, including apartment-type residential uses in mixed use designations.
- Active and publicly oriented uses will be encouraged at grade level throughout the campus. Retail, restaurants and similar active uses will be encouraged in the Campus Core, along Military Trail, and at the edges of major open spaces, where appropriate.

Urban Structure

Street and Pedestrian Connections

- Rapid transit service will be provided to campus, with stops at the following locations:
 - o On the east side of Morningside Avenue immediately south of Ellesmere Road;
 - o At the southwest corner of Ellesmere Road and the realigned Military Trail, which may be accommodated within a university building or structure;
 - o Within the realigned Military Trail right of way east of Morningside Avenue; and
 - o If ridership demand deems this necessary, within the Military Trail right of way generally between the transit stop at Ellesmere Road and Military Trail and the transit stop at Morningside Avenue and Military Trail.
- Military Trail will be realigned prior to or in conjunction with the implementation of rapid transit and will serve as a collector street. The realigned Military Trail will accommodate a central rapid transit corridor, vehicular lanes, bicycle lanes, pedestrian sidewalks, landscaping and other urban design elements.
- The present Military Trail alignment will accommodate pedestrian sidewalks and landscaping to ensure the long-term protection of this historic right of way.

- A private campus street will create a loop through campus, connecting from Military Trail south of Ellesmere Road through to Military Trail north of Ellesmere Road. It will cross Ellesmere Road by a grade-level pedestrian bridge. A series of additional private campus streets will provide access through the university campus, and all campus streets will be designed to municipal standards.
- A comprehensive network of pedestrian sidewalks will be provided throughout campus, including sidewalks along all streets.

Open Space and Environment

- The Highland Creek ravine will be protected as a significant resource for the university and surrounding community.
- Existing campus open spaces will be protected as important resources for the university.
- A variety of open space types and sizes will be provided in new areas of campus development.
- The following locations will be protected as future major campus open spaces:
 - o The present Military Trail alignment, which will serve as a landscaped pedestrian corridor;
 - o A major open space west of and midway along the present Military Trail alignment on the university's North Campus; and

- o A north-south open space west of and parallel to the realigned Military Trail on the university's North Campus.
- The campus character will be maintained by providing an appropriate balance of buildings and open spaces.
- Access to the university open space network will be encouraged for both the university and surrounding community.

Built Form

- The campus will be integrated with the city, providing an urban experience that activates the public realm.
- A consistent and cohesive street wall will be provided along Military Trail on the North Campus.
- Buildings should be located to define edges around streets and open spaces. Buildings will be massed to provide appropriate proportional relationships to streets and open spaces, and should minimize wind and shadow impacts to streets and open spaces.
- To permit buildings that are generally mid-rise in the academic precinct bounded by Military Trail, Morningside Avenue and Ellesmere Road. The tallest buildings will be directed to Military Trail, with high-rise buildings at the intersections with Morningside Avenue and Ellesmere Road.

- On the North Campus, buildings will transition down in height toward the residential neighbourhood to the east. Only low-rise buildings will be permitted directly adjacent to existing residential buildings along Challenger Court.
- New buildings will achieve a harmonious relationship with their built form context, including consideration of height, massing, scale, setbacks and stepbacks, roof line and profile, and architectural character and expression.
- The lower levels of buildings will be designed and massed to enhance the public realm.
- Built form will be further controlled through the implementing zoning by-law, which will include limits for building heights, setbacks and stepbacks.

Open Space

- A number of major campus open spaces will be protected from development. In addition to these open spaces, smaller open spaces and landscapes will be encouraged throughout the campus.
- Public access to campus open spaces will be encouraged.
- The university's ravine lands are a major open space and natural heritage resource for the university and the surrounding region. Continued use of the ravine for research and recreational uses will be encouraged, but the ravine will be protected from academic development.

Heritage

- The Miller Lash House will be protected as an important part of the university's heritage. Continued use of this facility as a functioning part of the university is encouraged.
- The Science and Humanities Wings will be recognized as an important part of the university's heritage. They will continue to play a functioning role for the university.

Transportation and Parking

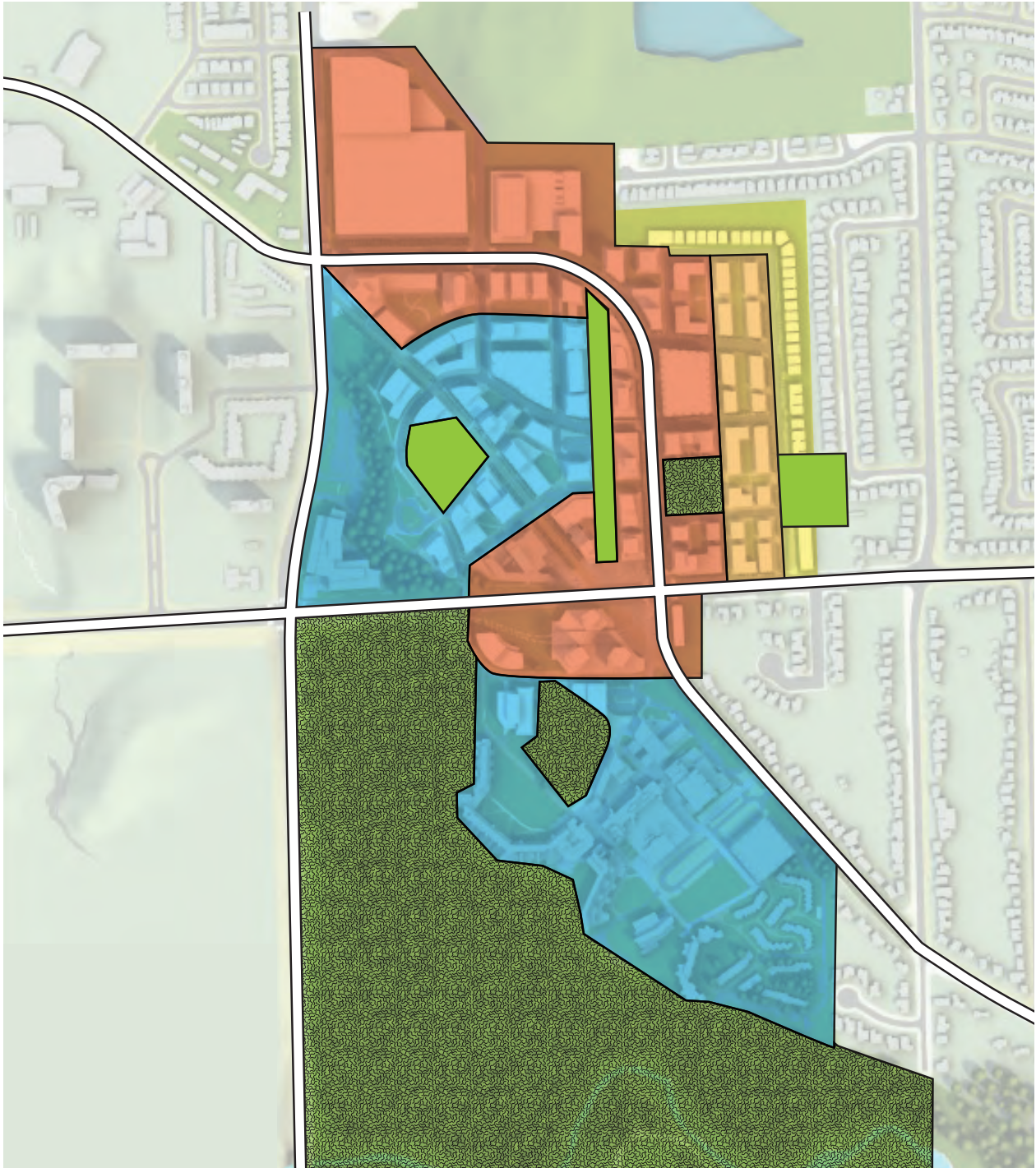
- Public transit, bicycle and pedestrian access to campus will be encouraged. Minimum and maximum parking standards will be developed to meet the needs of the university community and visitors while encouraging other modes of transportation. Parking standards will be developed based on population and modal split targets and not on building area.
- All campus streets will be designed to municipal standards and will safely accommodate all modes of transportation, including pedestrians, cyclists, transit vehicles and cars. Streets will be designed and landscaped as attractive elements of the campus open space system.
- Large surface parking lots will not be permitted as a long-term use for the university. New and replacement parking will be encouraged in parking structures, below grade under new buildings and in small convenience surface parking lots near

buildings. The transition away from large surface parking lots is expected to occur over a long period of time as development occurs.

- Existing large large surface parking lots will be broken down into smaller units and will be visually screened from the street with landscaping.
- Parking areas will be designed to protect sightlines, support pedestrian movement and ensure safety.
- The following built form principles will be applied to parking structures:
 - o Parking structures will have active or commercial uses at grade along building frontages and are encouraged to be designed as integrated parts of functioning buildings;
 - o Building articulation and high quality design will be used to provide an attractive façade;
 - o Public entrances will be designed as attractive and safe elements of the building; and
 - o Landscaping will provide an attractive grade-level experience where the parking structure is not screened by other uses.
- Small convenience surface parking lots will be located at the side or rear of buildings and screened with landscaping. Where the building does not front on a street, the front of the building is considered to be the building frontages that face the highest volume pedestrian corridor and are the location of the primary building entrance.

Servicing

- Underground tunnels and utility corridors may be required to service the campus.
- Infrastructure and utilities should be located below ground or screened from view.
- Service areas, such as garbage and loading facilities, should be located in the interior of blocks, where possible, and screened from view.
- Conflicts between service vehicles and pedestrians should be minimized through appropriate location and design of service facilities and access routes.



Secondary Plan Designations

- Institutional Areas
- Mixed Use Areas
- Apartment Neighbourhood Areas
- Neighbourhood Areas
- Natural Areas
- Other Open Space Areas

Figure 5.3: Secondary Plan – Land Use and Urban Structure

5.3.2 Proposed Zoning By-law Amendment Policies

The University of Toronto Scarborough campus will have a network of public streets, pedestrian connections, open spaces and development blocks, as illustrated and identified in Figure 5.3.

Land Use

- No person shall erect or use a building or structure for any purpose other than for institutional uses; laboratories; offices; community facilities; commercial uses including retail, restaurants, food store and commercial parking facilities; light industrial uses; and residential uses.
- All of the land uses listed above will be permitted in accordance with the land uses outlined in the Secondary Plan.

Heights, Setbacks and Stepbacks

- No person shall erect or use a building or structure that exceeds the building envelopes as set out in Figure 5.4.

Parking

- An appropriate range of parking spaces will be maintained on the campus based on parking ratios specific to each type of land use. Opportunities for sharing parking facilities among uses will be explored as the campus is developed.
- Parking will be permitted in below-grade garages, above-grade structures, in small areas near buildings and on local and campus streets throughout the campus.



- Legend**
- 2 storey
 - 4 storey
 - 4 storey
 - 6 storey
 - 10 storey
 - 16 storey
 - 21 storey
 - open space

Figure 5.4: Zoning By-law Amendment – Building Envelopes and Height

