

UNIVERSITY OF PRINCE EDWARD ISLAND

CAMPUS PLAN





University of Prince Edward Island Campus Plan

MAY 2006

Brook McIlroy Inc.
planning + urban design

Acknowledgments

The University of Prince Edward Island Campus Plan is the result of a collaborative process that engaged a broad spectrum of the University and Island communities. The Campus Plan was prepared under the overall leadership of President Wade MacLauchlan, Gary Bradshaw, Vice-President (Finance and Facilities) and the Campus Master Plan Steering Committee. The participation of representatives from UPEI's management and the Board of Governors during the process of creating and refining the plan has been invaluable. Contributions to this process were provided by students, faculty, staff and the community.

Additional consideration goes to the staff of UPEI who diligently supported the team throughout the process, particularly Dianne MacLean.

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Message from the President

The University of Prince Edward Island is anchored in a rich sense of place and heritage. With roots dating from the early 1800s, our campus has “good bones”. UPEI’s oldest landmark, Main Building, first served as a university building in 1855. The central quadrangle evokes the traditions of the classical college. This is a special place.

UPEI will be an extraordinary place in the 21st century. We will be smart. We will have fun. We will be leaders. We will be sustainable. We will be a provincial resource. We will be a cross-roads and a spring-board for a wonderful, successful community.

It is with a rich sense of place, and an optimistic outlook as we “lean toward the future”, that the University of Prince Edward Island has prepared this Campus Plan. Over a period of almost two years, UPEI has engaged in a long-range visioning and planning exercise. We have taken account of our assets, context, challenges, opportunities, standards, values and ambitions.

This Campus Plan has benefited from enthusiastic leadership, notably from a fourteen-person Campus Master Plan Steering Committee, fully representative of the UPEI and extended community. It reflects the expertise and guidance of consultants with wide experience in university planning. Above all, the Campus Plan reflects the optimism, ambitions and considered input of a community that intends for UPEI to be a great university, living up to the ten guiding principles of heritage, excellence, strengthened community linkages, integrated campus fabric, vibrant quality of life, pedestrian-friendliness, collaboration, accessibility, sustainability and student-centredness.

The Campus Plan is not a blueprint. It is a guiding framework. It will guide the development of a strong and integrated campus. UPEI will make choices and take initiatives, as opportunities arise and resources permit. The Plan will be a valuable reference, for a quarter century and beyond, with periodic reviews and updates to ensure that it remains strategically current.

We owe thanks to those who have led this process, and to all who have participated and contributed. We can best repay those efforts, and gain the greatest value from our Campus Plan, by acting upon it with the enthusiasm and rigour with which it has been created.

Let’s all look forward to a visit to UPEI’s campus in fifty years to see the results!

H. Wade MacLauchlan
President and Vice-Chancellor

May 2006

Preface

The University of Prince Edward Island has succeeded in building on its rich history to become a modern and progressive institution recognized across Canada and beyond for the quality of its education and research.

Over the last decade, the University has witnessed significant growth, through increased enrolment of Island residents as well as students from across Canada and around the globe.

In recent years, the range of campus facilities has grown as the result of increased enrolment paired with the University's success in attracting other complementary activities to the campus. Recent additions to the campus include the Province of Prince Edward Island's Food Technology Centre (FTC), the National Research Council's Institute for Nutrisciences and Health (INH), expansion of the Atlantic Veterinary College (AVC), and the Capital Area Recreation Inc. (CARI) community recreation facility. In addition, new buildings currently underway include a new residence and a joint facility for the Centre for Enterprise and Entrepreneurship & the School of Business Administration (CEESBA).

Given the University's strategic focus to create a cluster of innovation through complementary education and research uses, this trend is likely to continue. While enrolment is anticipated to remain stable, the opportunity to attract more research uses and other complementary services to the campus may continue to drive growth. However, expansion facilities in the University district will require a non-traditional approach to procurement and development through inventive partnerships with aligned institutions, government, the private sector, and adjacent land-owners. While the University alone does not have the resources to support the level of growth anticipated by this Plan, UPEI has a unique ability to proactively advance the creation of a cluster of innovation and excellence as a key to the Island's future prosperity.

The magnitude of change occurring on UPEI's campus and the need for an overarching strategic vision prompted the University to commission this Campus Plan. In early 2004, the University retained Brook McIlroy Planning + Urban Design to prepare the plan.

Three main objectives were established to guide the Campus Plan process:

- To analyze the use of current space resources and scheduling practices to identify opportunities for more efficient use of space in current operations and as new buildings are brought on stream.
- To provide the University with a vision for a physical framework designed to accommodate its growth in the next ten to twenty-five years. The Plan makes suggestions as to the location of buildings and their interaction with one another through open space design.
- To provide design guidelines to improve the functionality and appearance of existing and future facilities and amenities, including elements such as the design of University and Belvedere Avenues as key gateways to the campus.

The Campus Plan is intended to complement the Academic Plan, ensuring that the physical Campus continues to accommodate the vision and aspirations of the UPEI Community. The Campus Plan and Academic Plan should be viewed as documents that support and inform one another.

Throughout the spring and summer of 2004, the consultant team conducted a number of interviews with University and community stakeholders. An interactive workshop was held in March 2004, in which groups of eight to ten participants openly discussed and debated guiding principles, preliminary concepts and key opportunities. An open house

was held on September 30, 2004 to present concepts to the community and receive feedback. Input received was integrated to the concepts and presented in a second open house on November 8 and 9, 2004.

Throughout the project, presentations were made to the Board of Governors, the Steering Committee, representatives of UPEI's management group and a range of groups with special interest in the Campus Plan. Additional input and feedback was received through the interactive Campus Plan web site and through the questionnaires received from faculty, staff and students of the University. These consultations provide the foundation upon which the Campus Plan has been built.

The Campus Plan provides a framework for the continued growth and renewal of the University with an equal emphasis on the creation of buildings and open spaces that inspire and nurture a sense of identity and pride. The plan proposes the strengthening of the heritage character of the traditional campus core – an asset that is fundamental to the University's identity – while proposing that campus areas outside of this core be designed to reflect their contemporary context. A greatly expanded network of open spaces including quads, courtyards, tree-lined pathways and avenues, fields and naturalized areas will become the binding fabric that creates a campus that is both cohesive and beautiful.

The objective of all new interventions on the campus should be to actively stimulate intellectual and social exchange among the various constituencies of the University and the greater Island community. The Campus Plan supports UPEI's objective to strengthen its role as a social, cultural and economic partner on the Island, with activities reaching out to the larger regional and global communities.

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1 Analysis



2004: aerial view of the Campus, looking to the northwest. The Belvedere Avenue entrance can be seen in the foreground.



2004: aerial view of the Campus, looking toward downtown. The CARI facility, Chi-Wan Young Sports Centre and sports fields can be seen in the foreground.

1.1 Introduction

The 137 acre University of Prince Edward Island campus is entirely contained on a hillock called Mount St. Bernard, the former site of St. Dunstan's University. The campus is bounded by Belvedere Avenue on the south, University Avenue on the west, Confederation Trail on the east and Charlottetown Mall on the north.

Located three kilometres north of Province House in Downtown Charlottetown, the campus is a prominent landmark on the approach to the city core along University Avenue. The campus is centred on a formal quadrangle reminiscent of traditional university quadrangles common throughout England and North America and found for instance at Cambridge and Harvard Universities. Buildings around UPEI's Heritage Quad express a strong architectural character, based on the consistent use of materials, massing, roof forms and design vocabulary. More recent buildings and additions beyond the Quad employ a variety of materials and architectural treatments.

Since its inception as the University of Prince Edward Island - following the merger of St. Dunstan's University and Prince of Wales College in 1969 - UPEI has grown significantly to reach an enrolment in excess of 4,000 students in 2004-5. The University's current strategy is to stabilize undergraduate enrolment, while continuing to allow growth in graduate programs and research activities which are expected to constitute the largest part of growth on campus in the short to medium term.

1.2 History of the Campus

The University of Prince Edward Island was formed in 1969 through the merger of St. Dunstan's University and Prince of Wales College. The new UPEI came to occupy the former St. Dunstan's campus on Malpeque Road, now University Avenue.

1.2.1 The St. Dunstan's Years – 1855 to 1969

The oldest remaining building on campus – Main Building – opened in 1855 after ten years of construction. The original building received additions in the late 1800s and early 1900s and remained the principal building on campus until Dalton Hall was completed as a residence in 1917, originally with the goal of creating a missionary college at St. Dunstan's¹.

In the wake of World War II, as in the rest of Canada, St. Dunstan's experienced the twin challenges of a building stock weakened by years of wartime privations and renewed interest for post-secondary education. In fact, St. Dunstan's experienced a 43 percent jump in enrolment in the academic year following the end of the war. To fund a building program, the Diocese of Charlottetown launched a fundraising campaign in 1945, resulting in the completion of Memorial Hall as a residence in 1946 and followed soon after by a new heating plant and laundry, Steel Building – a facility originally designed to house the chapel, convent and dining hall in 1950, as well as a new gymnasium in 1951.

Significant construction activity did not resume on the campus until the end of the decade with the construction of Marian Hall in 1959, originally a women's residence. The years immediately prior to the 1969 merger of St. Dunstan's and Prince of Wales College saw the construction of Kelley Memorial Building, originally a library, the Chaplaincy Centre, originally the Student Union Coffee Shop, the Equipment Depot, Duffy Science Centre and Bernardine Hall.

It is interesting to note that the Sisters of St. Martha, who still live on their property immediately to the east of UPEI, performed various cooking, cleaning and other domestic duties for the St. Dunstan communities for many years, starting as early as 1916. Prior to that, these duties had been performed by a community of sisters from France living on campus¹.

¹The Golden Age of St. Dunstan's University – University of Prince Edward Island. The Handsomest Edifice by Michael O'Grady, 1980. UPEI Student Assignment completed for History 232.



1950's: aerial view of the Campus, looking to the northeast.

Campus Growth 1854 to 1969

Building	Year	Sq. ft.	Sq. m.
Main Building	1854 (full renovation 1989)	52,880	4,910
Dalton Hall	1917 (conversion in 1973)	24,000	2,230
Cass Science Hall	1939	20,770	1,930
Memorial Hall	1946	24,280	2,260
Steel Building	1950 (converted 1975)	29,900	2,780
Marian Hall	1959	23,240	2,160
Kelley Memorial Building	1963 (conversion in 1977)	31,650	2,940
Chaplaincy Centre	1965	4,080	380
Equipment Depot	1966	2,980	280
Duffy Science Centre	1966	56,260	5,230
Bernardine Hall	1967	45,670	4,240
		315,710	29,340

1.2.2 Prince of Wales College

Lieutenant-Governor Edmund Fanning, an early champion of education, granted two blocks of land in 1804 to create a college in Charlottetown. The National School, also known as Kent School or Breeding's School, opened in 1821. The Normal School was created in 1856 to train teachers. A third institution, the Central Academy, received its Royal Charter in 1834.

In 1860, the Central Academy became the Prince of Wales College in honour of Albert Edward, Prince of Wales, the future King Edward VII. In 1879, the College absorbed the Normal School and began to welcome female students.

Prince of Wales College (PWC) left its downtown Charlottetown campus to co-found the University of Prince Edward Island with St. Dunstan's University in 1969. The Prince of Wales College campus is now Holland College's Charlottetown home, while St. Dunstan's University sold its campus to the Province to house the new university.

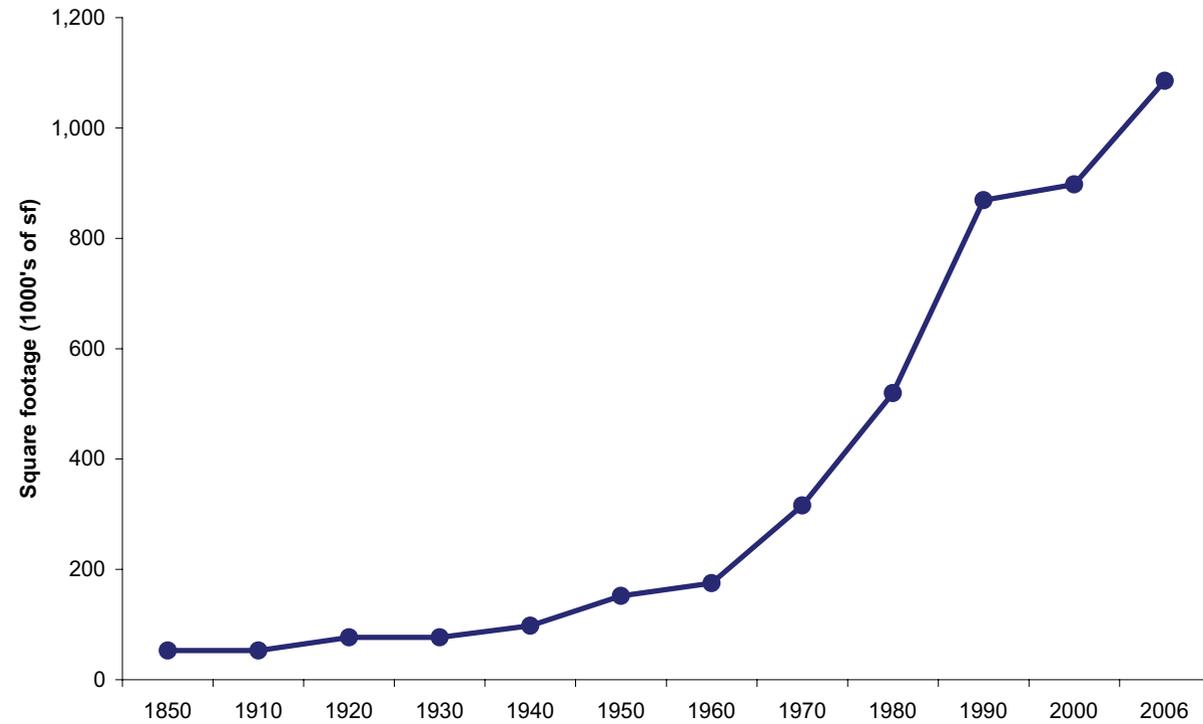


Photo: Archives of the Diocese of Charlottetown, ca. 1870



Main Building around 1870.

Through its history, Prince of Wales College remained a secular institution, and even barred members of the clergy from teaching its classes.

Prince of Wales College was given degree-granting status in 1965, with students graduating in 1969, the same year PWC joined St. Dunstan's University to form UPEI.

1.2.3 UPEI 1969 to today

In 1970, immediately following the merger of St. Dunstan's University and Prince of Wales College, enrolment almost doubled from 915 to 1,786³, calling for the immediate conversion and construction of new buildings. The growth plan was captured in a 1971 document entitled Program and Plan for Growth which outlined the need for a series of new buildings and parking facilities, predicting an ultimate projected peak in campus population in 1985. The 1971 plan anticipated the need to create an essentially pedestrianized campus with vehicles limited to the perimeter of the campus, a vision that has been maintained to date and is further reinforced in this Campus Plan².

Following the 1971 Plan, a new Central Utility Building was added in 1972 to provide heat and power to the campus. This new facility was followed by Blanchard Hall in the same year. In 1973, the Library moved from Kelley Memorial Building to the new Robertson Library. The new library had a significant impact as a symbol of UPEI as a modern institution with a critical mass of infrastructure. Also in the early 1970s, the Kelley Memorial Building was converted to house the University Administration and the School of Business Administration⁴. The 1970s also saw the conversion of Memorial Hall and Dalton Hall from residences into academic buildings, cementing the main quadrangle as UPEI's academic heart.

The Atlantic Veterinary College, built in 1985, also represented a profound addition to the campus by virtue of its size (over 250,000 square feet) and its regional significance as a centre of education and research. As a result, the AVC has become a catalyst in attracting related uses in the life sciences field on campus and nearby, including the Food Technology Centre, the Institute for Nutrisciences and Health and the Canadian Food Inspection Agency. Although no other new building was added to the campus in the 1980s, Main Building was fully renovated between 1987 and 1989. Renovations were also made to the Steel Building.

In 1990, two buildings focused on improving campus life, the Wanda Wyatt Dining Hall and the Chi-Wan Young Sports Centre became popular additions to the growing campus.

Enrolment growth soon required the construction of new academic buildings and resulted in the construction of the K.C. Irving Chemistry Centre in 1996 and the Classroom Centre in 2001. The 1990s also saw an addition and renovations to Cass Science Hall that coincided with the move of the Chemistry Department to the K.C. Irving Chemistry Centre.

The latest addition on campus was the award-winning WA Murphy Student Centre which opened in 2002. Designed to be a centre of campus life, it houses a cafeteria, stage, student pub, bookstore, medical clinic and offices of the Student Union. The northern section of the campus saw further changes with the addition of the Capital Area Recreation Inc. (CARI) facility in 2004, with twin hockey rinks and a swimming pool open to the public and the UPEI community, owned and operated in partnership with area municipalities.

Campus Growth 1970 to 2004

	Year	Sq.ft.	Sq.m.
Central Utility Building	1972	39,090	3,630
Blanchard Hall	1972	65,390	6,080
Robertson Library	1973	96,766	8,990
AVC	1985	246,332	22,884
Chi-Wan Young Sports Centre	1990	96,018	8,920
Wanda Wyatt Dining Hall	1990	14,100	1,310
K.C. Irving Chemistry Centre	1996	28,755	2,671
Classroom Centre	2001	17,930	1,670
W.A. Murphy Student Centre	2002	49,625	4,610
		654,006	60,765

Campus Growth 2004 – 2006 (current and projected)

UPEI is now in the midst of its largest expansion program since the 1970s with:

	Sq. ft.	Sq.m.
Institute for Nutrisciences and Health	57,380	5,331
New Residence	86,473	8,033
Additions to AVC (total)	84,000	7,804
Renovations to		
Duffy Science Centre	2,112	196
New Daycare building	4,247	395
Conversion of Marian Hall (existing building)	23,240	2,159
Marian Hall Addition	20,000	1,858
Renovations to Dalton Hall	TBD	TBD
(unlikely to add substantial square footage)		

²“Tenders called for two UPEI contracts” *The Pioneer* July 14, 1971

³“University builds lot to hold 600 cars” *The Patriot* October 8, 1971

⁴“Official opening set for UPEI Kelly [sic] building” *The Guardian* January 29, 1977



Photo: UPEI Photography

The Atlantic Veterinary College



Campus Plan Open House.



The lounge in the WA Murphy Student Centre is one of the most popular public spaces on campus.

1.3 Consultation Summary

Over the spring and summer of 2004, members of the Consultant Team met with members of the University Community and other interested parties, including municipal and provincial representatives. On May 4 2004, a Visioning Workshop was held on campus, in which participants were split into four groups to discuss key issues and opportunities for UPEI.

The following three points were mentioned recurrently throughout the consultation exercises. A full summary of consultation can be found in Appendix A.

Relationship with the Community

Over the years, UPEI has grown increasingly conscious of its critical role in the well-being and prosperity of Prince Edward Island. UPEI should continue to foster links with the Island community, reaching out through specialized courses that respond to actual needs. The Campus should become a more welcoming place through activities and events, as well as an attractive and open environment. Increasingly, the Campus will become more diverse, with a growing presence of research-focused

organizations, seniors pursuing lifelong learning opportunities and professionals honing their skills to maintain their competitiveness.

The improvement of the University's presence and interface with the community was a widespread wish. Specifically, participants requested the creation of gateways, architecturally significant buildings and unique landscape and streetscape design, particularly along University Avenue and at the Belvedere Avenue entrance. Workshop participants also noted the importance of adequate parking on campus.



The southwest corner of the Campus fails to convey the University's presence.



The open space on the eastern side of the WA Murphy Student Centre is well used.

Campus Maintenance and Appearance

Improvements in the appearance and functionality of buildings and outdoor spaces were mentioned as high-priority objectives. Older buildings need to be retrofitted to satisfy safety requirements, provide universal access and satisfy the demands of modern research and teaching practices that are often more flexible and collaborative in nature. New buildings should embody these values in their design, featuring flexible layouts and offering centrally-located common spaces that build on a strong tradition of student-faculty interaction. A key component of the Campus Plan will be to provide a strong framework for growth to help the University locate new buildings and facilities according to a long-term development perspective.

New buildings will need to acknowledge the heritage of the Campus and draw on PEI's architectural traditions which, along with high quality materials, will contribute to an aesthetically pleasing and harmonious campus. The Campus Plan should define a UPEI palette of styles and materials that will guide the designers of future buildings.

Several participants in the consultation process identified the need for the University to improve the appearance of its outdoor areas. In particular, the plethora of pathways constructed of asphalt - often in need of repair - detract from the image of the campus. Future improvements in the campus grounds should include high quality pavement materials such as brick or unit pavers for pedestrian paths, consistent wayfinding and signage, and improved outdoor landscaping, lighting and furnishings.



Above are some examples of areas in need of attention including pedestrian pathways that lack definition, unscreened utility boxes, and generalized driving on pedestrian paths.



A photograph taken in March shows how the gradual expansion of the path network has resulted in an excess of asphalt in the Quad.

1.4 Guiding Principles and Opportunities

1.4.1 Principles

The following ten principles were identified to serve as building blocks of the Campus Plan and guide Campus development in the foreseeable future. They were further refined through the consultation process.

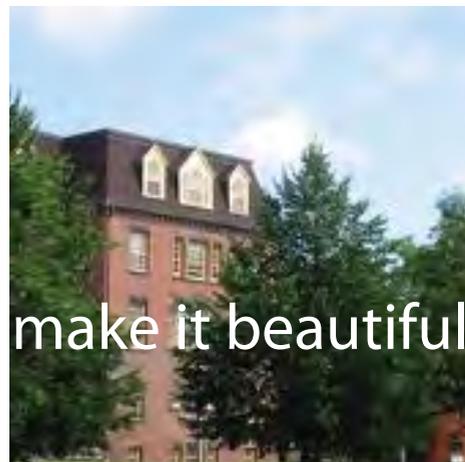
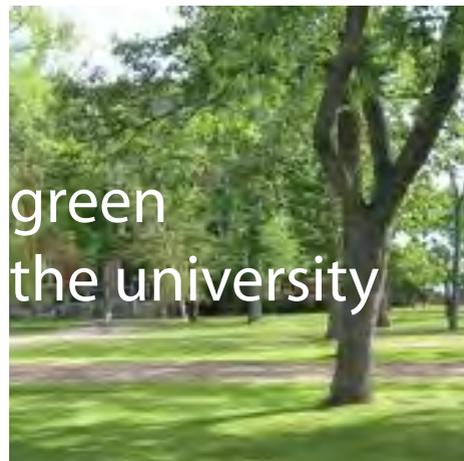
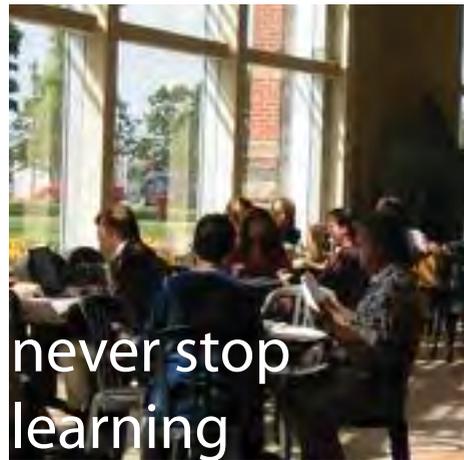
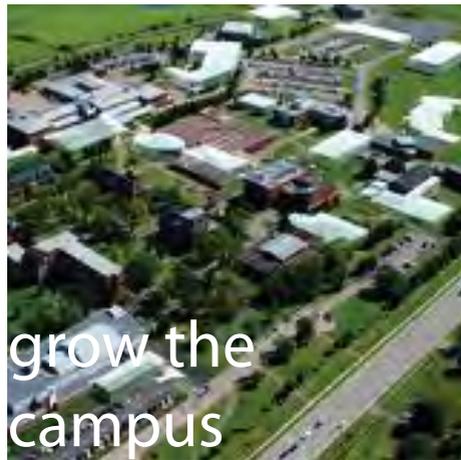
1. The Campus builds on 200 years of post-secondary education in PEI;
2. The Campus supports a continued emphasis on excellence in teaching and research;
3. The Plan helps to strengthen physical and virtual links to the Community throughout the Island;
4. New buildings that complement existing facilities are integrated into the campus fabric;
5. The Campus is vibrant throughout the day and in all seasons, and offers an unparalleled quality of life;
6. The Campus is pedestrian-friendly;
7. The Campus encourages interdisciplinary collaboration and informal interaction;
8. The Campus is accessible to all;
9. Campus growth is based on the principles of sustainable development;
10. The Campus reflects a student-centred approach to design and services.

1.4.2 Opportunities

The following opportunities have been identified as a foundation for the preparation of the Campus Plan.



UPEI's Heritage buildings like Dalton Hall are a unique asset that must be preserved for future generations.



The 'Mosaic of Opportunities' defines a new path for UPEI.



grow the campus

The UPEI campus has enough space to double its activities. Growth will occur as a result of improved teaching and research facilities, but also as result of new partnerships with the community, business and research organizations, life-long learners, kids and families. The definition of what a campus can be should not be limited by tradition. The UPEI campus can become a dynamic, year-round centre of Island life with buildings that support vibrant, social, intellectual, fun, practical and challenging activities.



never stop learning

UPEI's outreach programs, like the Seniors' College, form the building blocks of a campus that welcomes people of all ages. With the introduction of a mix of uses on campus, including more places for cultural and social activity like the community recreation hub of the CARI Facility, UPEI can attract people of all ages to the campus, including the growing seniors population. Many Universities have partnered with community associations to create seniors residences on their land. Why not here?



a place for all ages

The University can expand the learning horizons of children earlier in life. The campus already has a renowned daycare facility and the Vet Camp is famous throughout the country. The CARI facility has introduced to the campus a regional centre for athletic training and camps. As the campus becomes a more inviting and mixed use environment, there is an opportunity to introduce children, teens and their families to a world of knowledge and fun. Children are UPEI's future: let's start building the future now.



excel in teaching

Teaching is the core of UPEI's mission. The campus can support both traditional teaching methods and innovative approaches through a range of facilities and places that engage students and educators in a setting of excellence and exploration. Learning can be advanced in both formal and informal settings, and the campus plan identifies new areas that blur the boundaries between the traditional classroom and social spaces. Guidelines for campus buildings, outdoor areas and space standards for new facilities address the need for the campus to provide the best setting possible for learning.



cluster innovation

Universities of all sizes are competing to attract institutional and private research to create research clusters of global reach and reputation. UPEI has already achieved tremendous success in life sciences. The Plan will assist UPEI to provide an attractive environment for new entities through

the identification of:

- appropriate sites to foster collegiality and the sharing of information;
- necessary amenities and services;
- a set of criteria to ensure the complementarity and appropriateness of partners.



make a scene

A rich cultural life on campus will draw the community to the campus and help to attract students, faculty and staff to UPEI. We know the University as a centre for knowledge, training and innovation, but it can also be a cultural catalyst that pushes the boundaries of the mainstream. The campus can provide a network of cultural infrastructure through its facilities and programs. Think of a campus that is vibrant day and night, summer and winter – a hub of creative thought, discourse and expression.



walk

The campus is a great pedestrian environment – but the weather is a force to contend with! The campus should grow to create a tighter fabric of buildings linked with sheltered breezeways that open up in warmer months. The walk from parking to classes can be vastly improved by planting design that creates wind shelters. Parking lots should also incorporate trees to create shelter, shade and beauty. While the core campus should continue to be a car-free zone, a series of drop-off & pick-up areas in proximity to the core will be provided.



be accessible

Students with disabilities represent about 7 percent of the university and college population in Canada, while it is believed that 13 percent of the working age population have a disability. Many barriers continue to keep eligible students from attending university. Accessibility should be built into all new buildings and a plan should be adopted for the progressive retrofit of existing campus buildings, pathways and access points. The emphasis should not be exclusively on mobility challenges, but other disabilities as well, including visual and hearing impairments.



embrace community

The new campus will breathe in and out. The University's presence will be extended by creating attractive and inviting edges, including a revitalized University Avenue and Belvedere Avenue with tree-lined sidewalks, safe pedestrian crossings, more signalized intersections and an attractive "face to the community" through new buildings and landscape design. The University will present the community with an open invitation through the beauty of its network of green spaces and a dynamic mix of activities and venues of direct relevance to the lives of every Islander.



green
the university

green the university

Universities are expected to be environmental stewards. There are many ways in which UPEI can minimize its environmental footprint through its capital projects, renovations, maintenance and operations. Sustainability is woven into every aspect of the plan. An important initiative is the

greening of the Campus with native species, effectively “inviting” nature back on campus. In addition, internationally recognized programs, such as LEED, provide guidance for sustainable practices. Approaches like *The Natural Step* assist organizations to reinvent themselves as green entities through extensive participation.



hang out
and learn

hang out & learn

Learning techniques have changed. Students no longer just study at a carrel or in their dorm. Students and faculty look for more informal spaces to learn and interact, such as common areas and easily accessible meeting rooms. These spaces should offer comfortable seating and wireless

access. A number of communal spaces should be strategically located on the ground floor of new buildings with windows that overlook attractive outdoors spaces. New spaces should be created in existing buildings as major renovations occur.

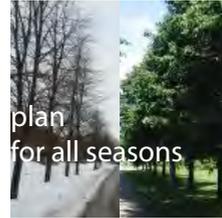


think
outdoors

think outdoors

By creating more inviting, sheltered outdoor areas, the campus can provide a network of places to study, socialize and even teach in beautiful outdoor spaces. Views between indoor and outdoor areas should be maximized to provide a sense of safety through informal surveillance.

While winter is a challenge, much greater use can be made of outdoor quads and courtyards through imaginative landscape design.



plan
for all seasons

plan for all seasons

The Campus seems to attract wind and snow. Some strategies to mitigate the impact of severe weather include:

- an increased proportion of students living on campus;
- the addition of breezeways or colonnades to

create sheltered pedestrian routes in the core campus;

- aligning building entrances to create shortcuts through buildings;
- siting new buildings to act as windbreaks;
- planting trees to shelter pedestrians from wind;
- building design with a greater proportion of glass especially on the ground floors to illuminate the Campus after dark.



make it beautiful

make it beautiful

A strikingly beautiful Campus is an effective recruitment tool and a source of pride for the University Community and Islanders. Outdoor spaces can be reconceived as spaces for teaching and relaxation based on thematic landscape designs. A concept for planting, outdoor furniture,

lighting and a more attractive network of pathways are key initiatives of the Campus Plan. New buildings should echo the existing campus fabric in scale and materials, but should otherwise be contemporary in design to reflect the innovative and progressive environment at UPEI.



nurture island
identity

nurture island identity

A vibrant campus that demonstrates excellence in architecture, landscape design and sustainable development will strengthen island identity and the sense of pride in the University. The core of campus identity today is the heritage quad lined with its stately array of brick buildings. This

heritage area must be protected and enhanced through improvements to the quad – for instance through the replacement of asphalt paths with brick walkways. On-going maintenance of the University’s heritage buildings is a key principle of the campus plan.



Main Building

2 The Campus Plan Concept





2.1 Introduction

In its 150 years of existence, the campus has tended to grow in bursts, with a series of buildings added over short periods of time. In the early 1970s and again in the early 1980s, campus plans were prepared to guide this growth. Twenty years later, UPEI is again experiencing significant growth. The advantages of long-range physical planning are numerous:

- Assessment of sites most suitable for development;
- Assessment of potential land acquisitions for expansion or parking;
- Definition of an open space network;
- Identification of coherent, functional and attractive pedestrian and vehicular networks;
- Designation of key signature buildings and gateways;
- Prevention of potentially detrimental moves, such as placing buildings on key open spaces or access routes or underdeveloping key sites.

2.2 Context

A number of trends on campus and in the surrounding community have shaped the built form and general appearance of the campus:

- The University was once perceived to be remote from downtown, but as Charlottetown and its suburbs have grown, UPEI is increasingly seen as a central location. The University lands, the Sisters of St. Martha's lands to the east and the Agriculture Canada lands to the south provide a respite of open space amidst commercial and residential development.
- In the Quad, academic buildings are clustered around a formal central open space, but more recent buildings have not followed this traditional arrangement and have at times neglected to seize opportunities to define outdoor areas.
- A consistent architectural palette that features red brick, slate roofs and an interpretation of Georgian architecture characterized by clean lines and simple building shapes was in place on campus until the 1970s. Even buildings constructed in the 1960s and early 1970s – Kelley Memorial Building, Duffy Science Centre, Bernardine and Blanchard Halls – continued to use the same red brick palette. Recent buildings, starting with the Robertson Library, have introduced new materials including metal siding and concrete.
- The lack of transportation alternatives available to Islanders and a broader access to private vehicles have resulted in the need to provide new parking spaces in accordance with campus population growth.

2.3 Key Structuring Elements of the Campus Plan

The Campus Plan reflects nine key concepts that have shaped its physical configuration. Collectively, and in association with the Guiding Principles, they form the fundamental building blocks of the Campus Plan and embody the strategic framework that should guide future campus development. As with any campus plan – opportunities and priorities that evolve over time may dictate that the specific configuration proposed by this plan be altered. For instance, buildings may require larger or smaller sites than identified in the Plan. In this sense, the Plan must provide a flexible framework that can be adapted over time. What must remain firm, however, is an adherence to the structuring elements

and guiding principles that embody the “values” of the University and community as it relates to the creation of a welcoming, efficient and attractive environment for learning and living.

2.3.1 Campus Districts

The Campus Plan is subdivided into three districts. The Core Campus represents the majority of the existing developed area extending from the CARI Facility to the north to the KC Irving Chemistry Centre to the south. At the heart of the core is the Heritage District.

The South Campus encompasses the area occupied by Blanchard Hall, the New Residence, the Food Technology Centre and Parking Lots A and

B. The North Campus extends from the Sports Fields on the south to the Charlottetown Mall on the north.

The Heritage District

Within the Core Campus Area, the historic centre of the University is defined by a series of 19th and 20th century buildings grouped around the Heritage Quad. The Heritage District is the symbolic heart of Campus and a key area to be preserved and enhanced through investments in landscaping, tree replacement, an improved pathway system, building restoration and carefully designed building infill and additions.



2.3.2 Campus Capacity for Growth

There are multiple factors which will influence the need for growth in campus facilities in the future. They include:

- Internal space needs to accomplish the University's mission;
- New outreach programmes such as an expanded Seniors College and the Centre for Enterprise and Entrepreneurship;
- New research funding;
- Expansion of graduate programs;
- Expanded government mandates such as nursing training;
- Stepped up recruitment effort of off-island students, particularly international students;
- Increase in percentage of students living in residence;
- New Allied Research uses like the Food Technology Centre and the Institute for Nutrisciences and Health

- Community facilities like the CARI facility; or future cultural facilities;
- Renewed focus on the provision of conference facilities and flexible meeting spaces.

UPEI's diversifying identity, natural fluctuations in the economy and other factors – including demographics, rates of immigration and the competitive environment – are all factors that complicate the determination of future growth rates. However, the Campus Plan provides a growth path that will allow UPEI to respond to needs as they occur by identifying priority sites, the appropriate footprints of buildings and their possible uses. In summary, the Plan does not prescribe or anticipate the exact timing of development but provides a roadmap to guide UPEI's orderly growth in the physical realm. A series of potential building sites that include additions to existing facilities has been identified to provide a framework for growth for the campus. Key structuring elements described in this section determine the location of these sites, in addition

to a revised circulation and open space system. A priority has been placed on infilling the core campus. Three broad periods of growth are presented in the phasing concepts: short, medium and long range.

The Potential for Growth

Since 1950, the campus has grown by an average of about 20,000 square feet per year. In 2005 the total building area of all facilities on campus is approximately 1.1 million square feet. Buildings under construction or anticipated to be built in the near term constitute an additional 260,000 square feet. The new building sites identified by the Campus Plan equate to an additional 869,000 square feet of building area in the southern portion of the campus, and 661,000 square feet in the North Campus. This number is based on an average building height of three levels.

The accumulated total of existing, proposed and future development is 2.8 million square feet. Based on the historical average of annual growth in campus facilities of 20,000 square feet, there is sufficient development capacity on the existing campus to accommodate growth for another 77 years or until 2082.



Short Range Plan shows existing campus buildings in white, and proposed buildings in orange.



Medium Range Plan shows existing campus buildings in white, and proposed buildings in orange.



Long Range Plan shows existing campus buildings in white, and proposed buildings in orange.

2.3.3 A Network of Linked Open Spaces

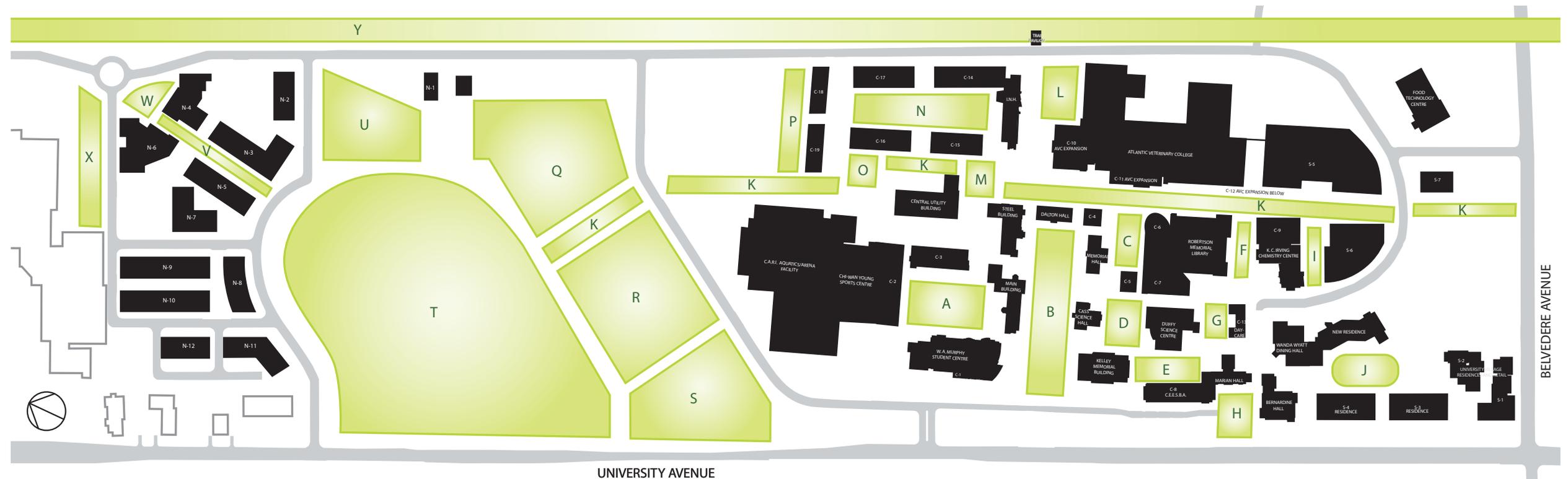
Beginning with the Heritage Quad – and a series of semi-defined open spaces that presently exist throughout the campus – the Plan proposes an extensive pattern of formally designated linked open spaces including quads, courtyards, commons, plazas, fields and meadows. In conjunction with the pathway system, these elements form the backbone of the campus’ spatial organization and determine the appropriate location and footprint of future development sites. The Plan recommends the naming of each of these open spaces for them to be understood as key places throughout the campus – as important as the buildings that frame them. As the Plan is implemented, the University should undertake a formal naming program that reflects key landscape features, people or events linked to the University’s culture and history. Every space should be designed and have a unique planting character so that they become key to the campus way-finding system. For instance, in directing a visitor to the Chaplaincy Centre, one would refer to its location on the Library Courtyard.

Each space should be the subject of a design exercise to determine the specific character and configuration of tree planting, public art, furnishings, lighting, signage, trash receptacles and other amenities. Each space should facilitate active use for both informal and formal use. They should be designed as places for contemplation, social exchange and learning.

This system of linked open spaces will be the single most important element to create a campus of lasting beauty.

Index of Open Spaces

- | | |
|------------------------------|--------------------------------|
| A - Student Commons | N - The Green |
| B - Heritage Quad | O - Sumach Grove |
| C - Library Courtyard | P - Water Gardens |
| D - Science Courtyard | Q - Playing Field |
| E - Marian Terrace | R - Playing Field |
| F - Dogwood Row | S - The Meadow |
| G - Children’s Garden | T - The Pond |
| H - Marian Courtyard | U - The Forest |
| I - Willow Walk | V - Promenade |
| J - Residence Commons | W - North Gateway |
| K - Linden Allee | X - The Forest |
| L - East Quad | Y - Confederation Trail |
| M - Birch Grove | |

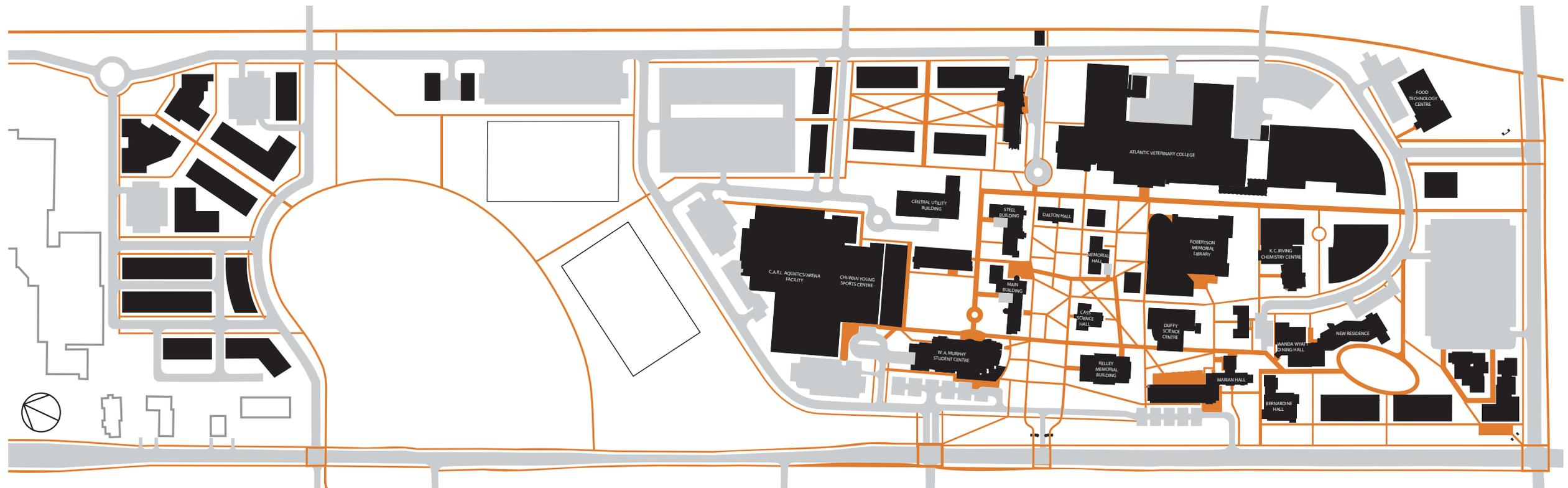


Open Space Network

2.3.4 A Web of Pedestrian Walkways

The Campus Plan expands upon the existing pathway system – especially the magnificent tree-lined allées that exist on campus – to create a network of continuous tree-lined walkways. The ability for people to walk easily and safely from one end of the campus to the other is an important feature in creating an inviting and functional pedestrian-friendly campus. As the campus develops, surface parking will increasingly be shifted to the campus periphery resulting in increased walking distances from parking. Tree-lined walkways will provide some level of weather protection, but wherever possible, new buildings (or additions to existing buildings) should provide protected breezeways, semi-weather protected colonnades and interior walkways that flank outdoor pathways and open spaces. The sequence of walking from an outdoor parking area to a destination in the core of the campus should be given an improved degree of shelter.

Key elements of this network include: the existing Linden Allée on the west side of AVC that is extended south to Belvedere and north to the Pond. The series of campus pedestrian routes is shown below. Consistent pedestrian lighting should be installed every 15 to 20 meters along these pathways and directional signage and campus maps provided at key locations. These pathways should be considered priority areas for replacement of asphalt walkways with new brick or unit-paver surfaces.



Proposed pathway network: roads are shown in grey, pedestrian pathways in orange.

2.3.5 Inviting Edges

The presence of the University in the community can be greatly enhanced through special attention to the character of the campus edges. University and Belvedere Avenue frontages are beautified through the planting of double rows of trees, with sidewalks set back from the roadway curb. Key gateways are identified along the length of these frontages, with new 'right-in/right-out' access points provided to create a more permeable campus. These gateways should be formally marked through gateway structures and attractive signage. Of particular significance is the reinstatement of the gateway to the campus at the Heritage Quad. A right-in/right-out access point centred on the Quad is recommended with a pedestrian activated signal to facilitate safer pedestrian crossings of University Avenue. Stone or masonry gateway structures are proposed to signify the entrance to the heritage core of the campus and to draw attention to the beauty of the Quad.

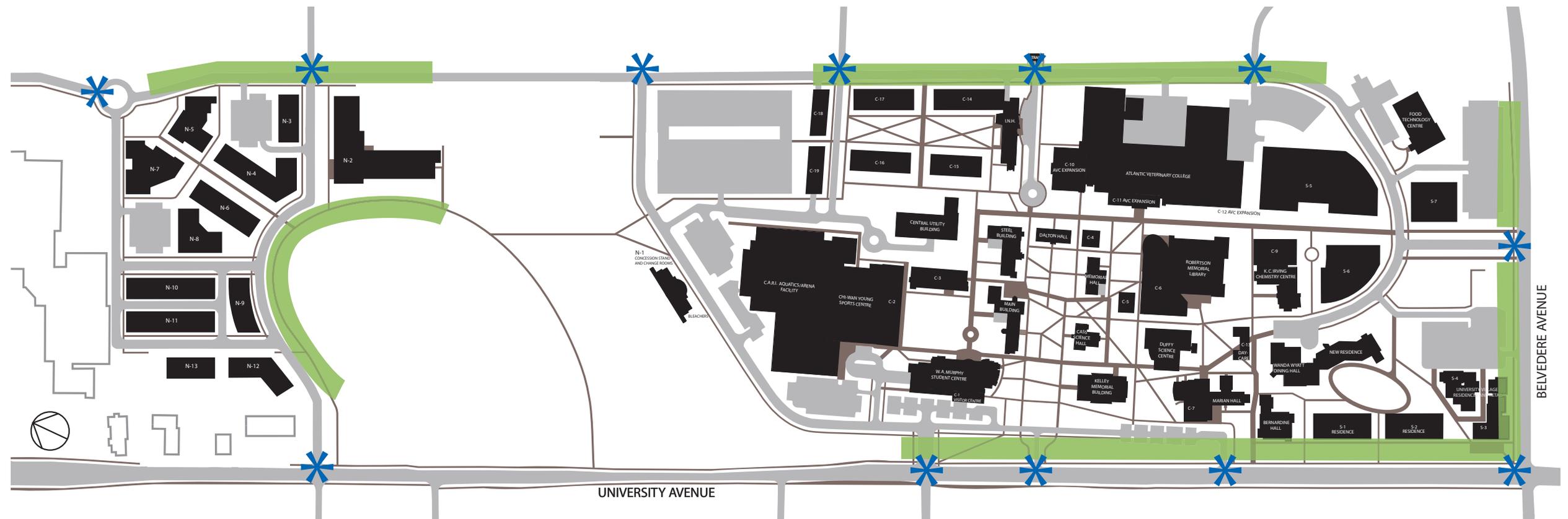
An important initiative of the Plan is the transformation of University Avenue to become a tree-lined boulevard recognizing its symbolic role as the gateway to Charlottetown and the University.

It is equally important to consider the University's east boundary flanking the Confederation Trail. Presently, this edge appears to be the University's backdoor, but over time will become as important as the University's presence on the surrounding road network. Future potential gateway locations are therefore designated by the Plan.

The University's face to the community can be further enhanced through the development of building sites along these edges that are carefully designed to be welcoming yet convey the permanence and dignity of the University.

2.3.6 Improved Access

Presently, the Campus operates with only two access points – at University Avenue and Belvedere Avenue. The Plan proposes several new access points from these bordering roadways as well as a link to Mount Edward Road through a new road extension through the North Campus. Two new signalized intersections are recommended as three new right-in/right-out access points.



Campus edges are shown in green. Points of access are shown as blue asterisks.

2.3.7 University Lands Context

UPEI has a unique opportunity to become the hub of a regional cluster of activities in the areas of research, innovation and lifelong learning. The future uses of surrounding lands are therefore of great strategic interest to the University. UPEI should therefore carefully monitor the evolution of these properties and proactively participate in a planning process that will ensure compatible and strategically complementary land uses. Joint development or use of open space may also be possible if strategic goals of both parties are met.

In the meantime, the Campus Plan generally focuses on lands currently under UPEI ownership. The Campus Plan anticipates greater future integration with lands to the east, north and south through pathways and road linkages, gateways and appropriate treatments of these campus edges as future 'front doors' to the University. The University lands are also an important link in the city open space system. The preservation of the environmentally sensitive Pond area as a link in the watershed is a priority in the treatment of the North Campus.



Plan showing surrounding properties.



2.3.8 UPEI's Role in City Building and Planning

UPEI occupies a prime location at the entrance to the City of Charlottetown. Every day, UPEI touches thousands of lives – students, faculty, staff and visitors. Given its location, its land mass and social, cultural and economic importance, the University of Prince Edward Island has a responsibility to become thoroughly involved in the exercise of city building.

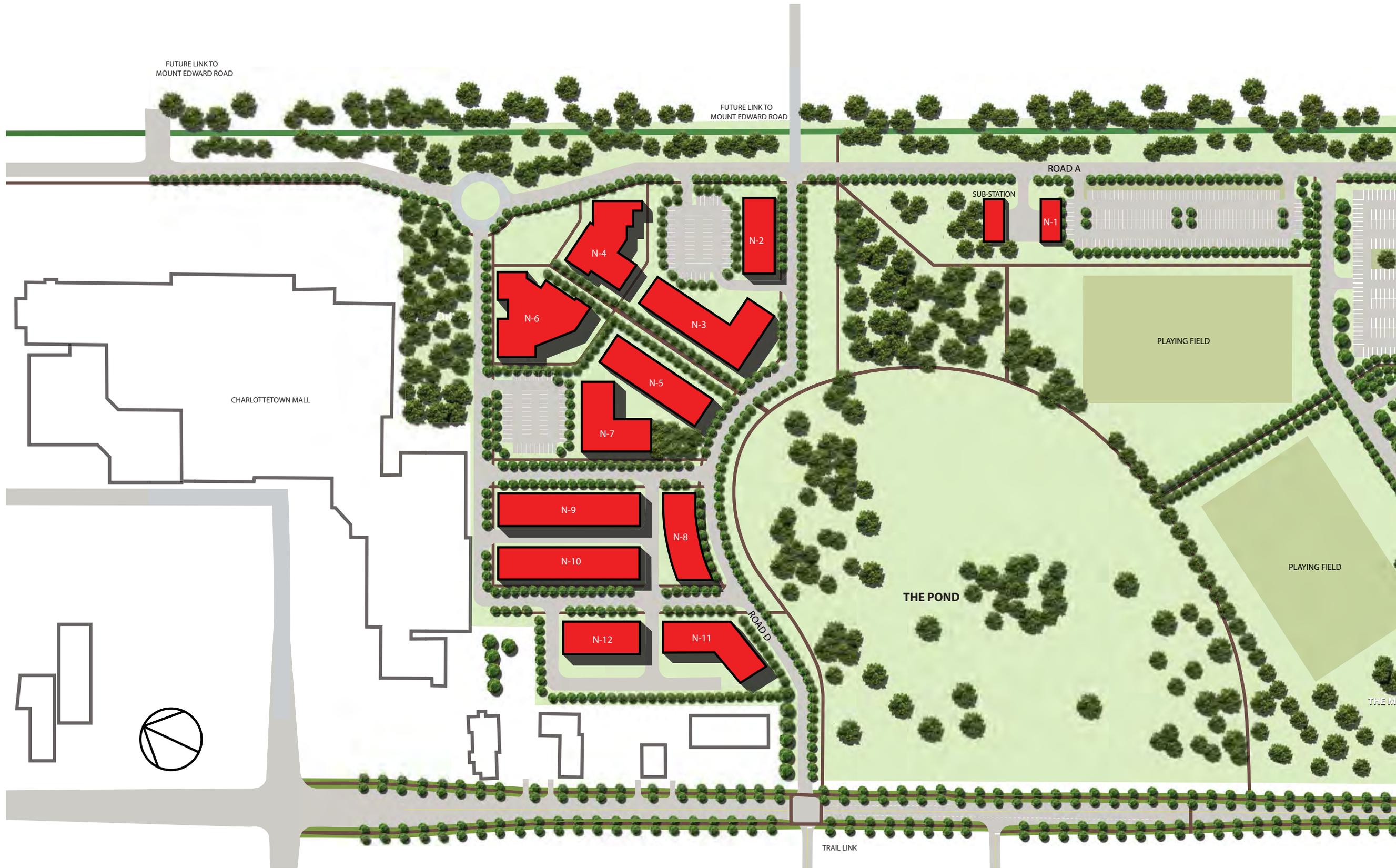
Several opportunities exist for this to happen:

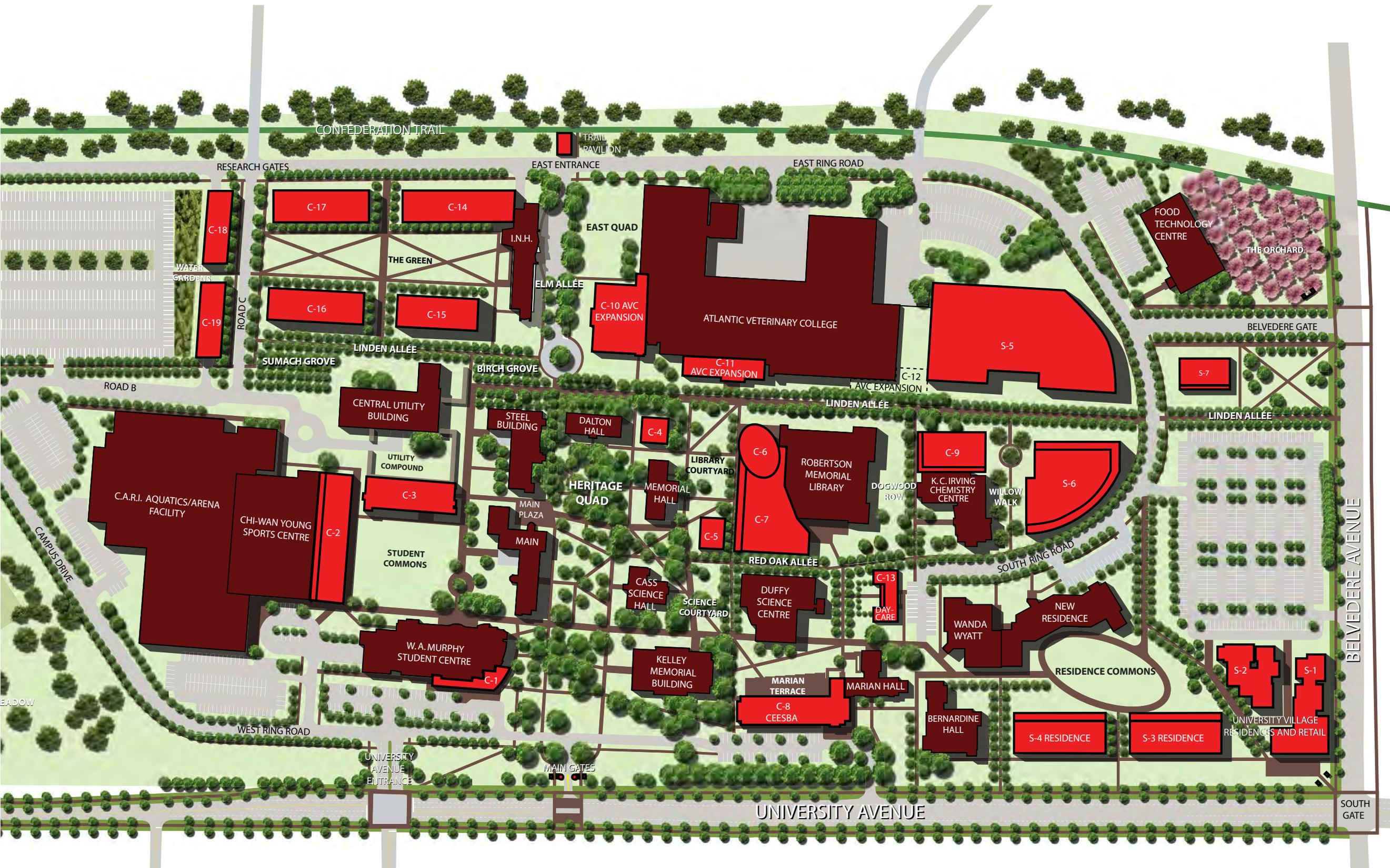
- UPEI should consider spearheading the formation of a joint planning committee to ensure that the new Official Plan reflects and addresses the needs of UPEI, and that planning issues of interest to UPEI, including transportation and the transit system, the future of University and Belvedere Avenue and uses on adjacent lands are addressed proactively and appropriately.
- On the model of several North American universities, UPEI should explore the possibility to fully assume responsibility for its own planning – potentially with some collaborative involvement by City representatives – to effectively remove itself from the City of Charlottetown zoning approval process, while retaining the option of an appeals process to ensure fairness.

2.3.9 A Compact Campus

In the planning of educational institutions, walking distance is a key determinant in the siting of academic buildings since students and instructors must be able to travel from one class to the next usually in less than ten minutes. The walking distance radius shown below illustrates the importance of maintaining academic buildings within the core campus area. Priority in the placement of new facilities is therefore given to infilling the campus through new building sites and additions in proximity to existing buildings.







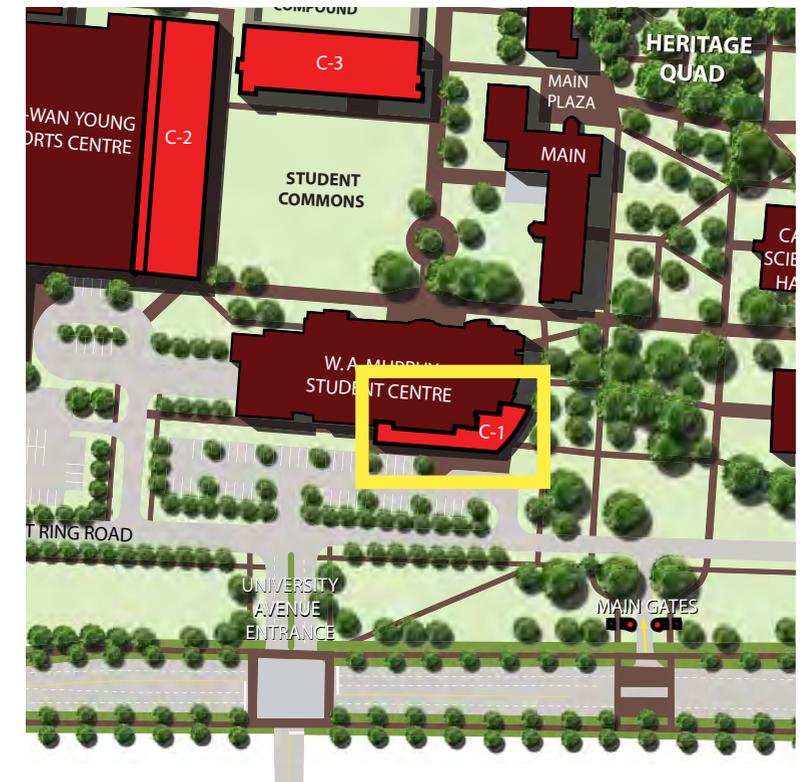
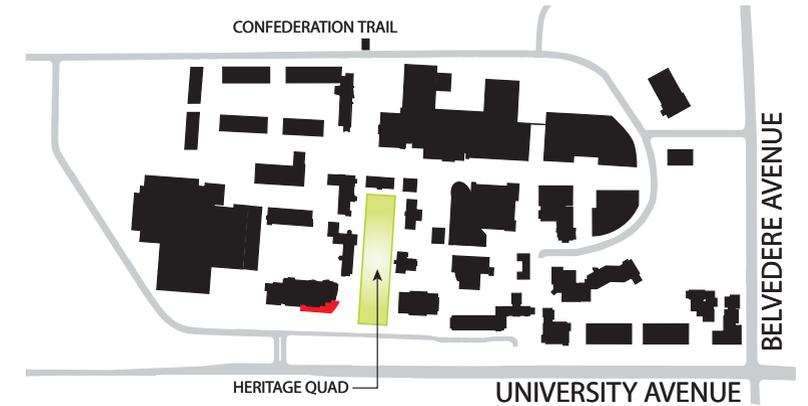


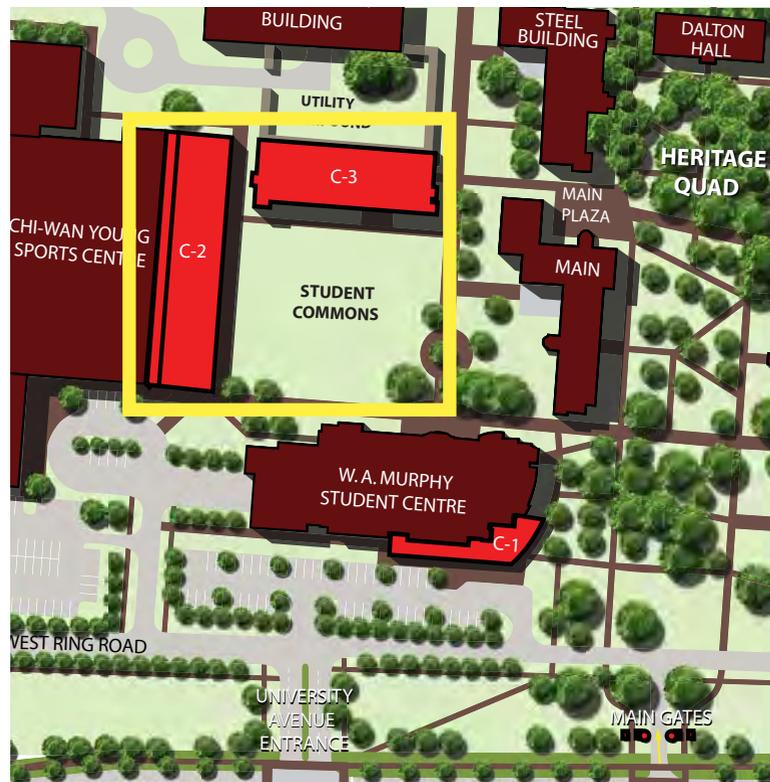
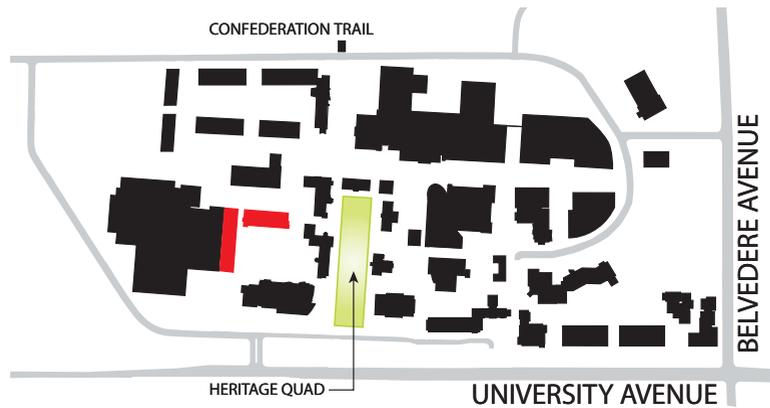
2.4 Campus Opportunities

The following section identifies the range of facility development and open space opportunities that are available on the campus. Many of these improvements may only be realized in the very long-term and as a result of University partnerships with a range of compatible funding sources.

2.4.1 The Core Campus The Visitor Centre (C-1)

The W.A. Murphy Student Centre is uniquely positioned to welcome visitors on campus and portray a positive image of UPEI to passers-by on University Avenue. The Visitor Centre is proposed as an addition to the Student Centre featuring an extensive west-facing glass façade that will enliven the presently windowless wall. The addition would connect to the existing popular lounge area and constitute a first point of contact with the University. This addition would house an information desk where visitors can obtain information about UPEI and would provide an exhibition space and a public lounge with wireless access for students, faculty, staff and visitors. This space could also accommodate an indoor waiting area that allows future users or car passengers waiting for a ride to wait in a comfortable, safe and stimulating environment. This addition would create a highly visible and welcoming presence on University Avenue at the main entrance to the Campus.





Buildings on the Commons (C-2 and C-3)

Two new building sites are proposed east of the Student Centre to frame a new formal open space: Student Commons. This new quad takes advantage of its strategic central location close to the heart of campus life: the WA Murphy Student Centre, the Chi-Wan Young Sports Centre and the CARI Facility. These two future buildings will assist in defining an active open space area between Main Building, the Student Centre and the Sports Centre.

These buildings may contain uses that would benefit from being located at the centre of campus life, such as classrooms, including 80-100 seat classrooms, conference meeting space and public spaces opening onto the commons. Large ground floor windows open in the warmer months to create an attractive indoor-outdoor interface.

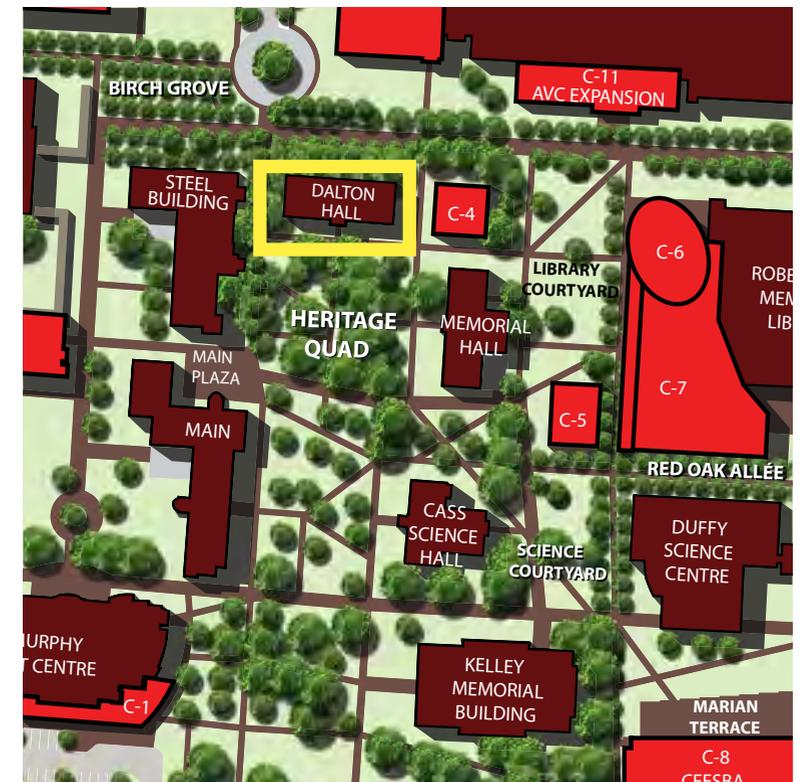
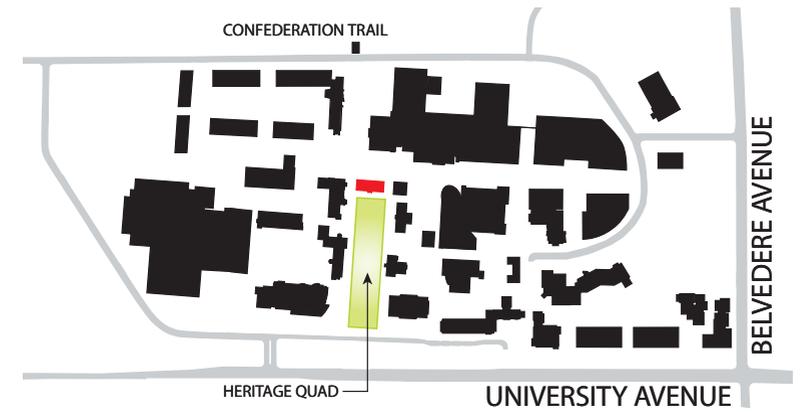
These new buildings should be designed to maximize access to natural light through the use of a narrow footprint. Building C-2 is proposed to act as an addition to the Chi-Wan Young Sports Centre, providing a lively animated façade along what is now a blank wall. Building C-3 would be sited on the present location of the Equipment Depot (to be relocated to the North Campus (see page 45, N-1)). Its east wall would enclose the outdoor area of the Central Utility Building so that these somewhat unsightly uses would be shielded from the Main Campus.

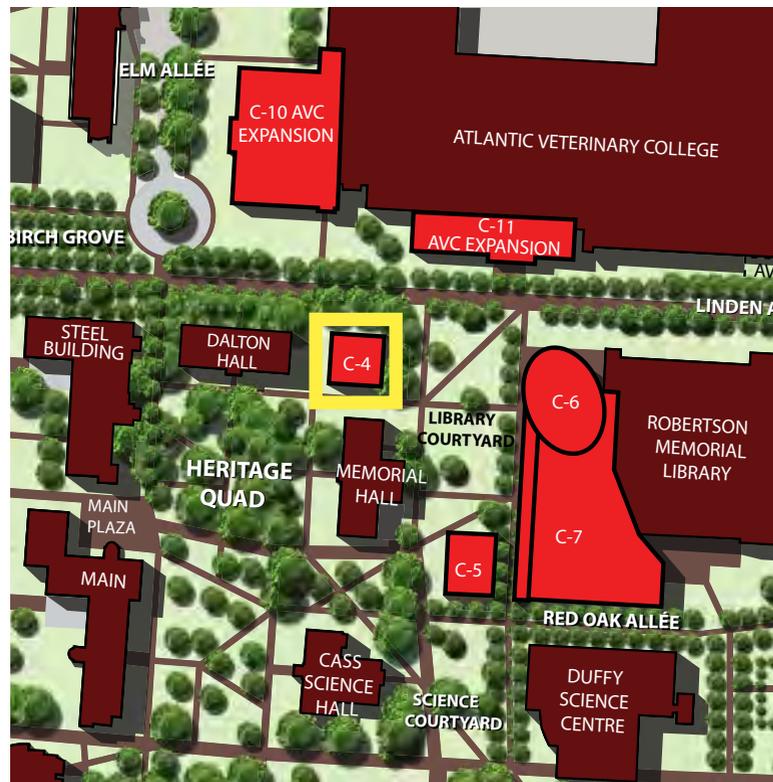
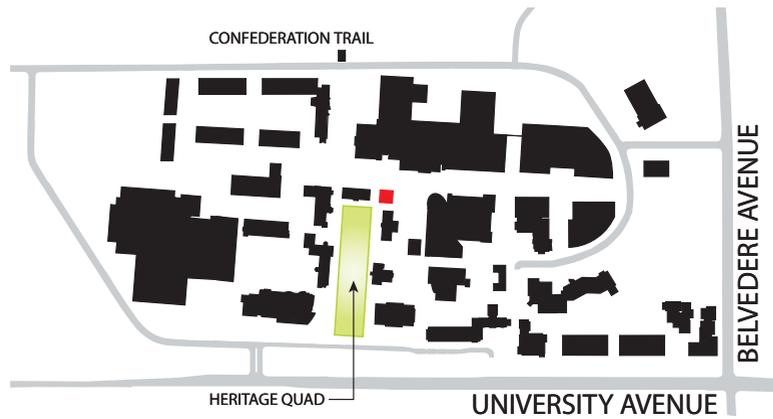




Dalton Hall

Dalton Hall occupies one of the most significant sites on campus, at the head of the Heritage Quad. Since its opening in 1917 as the second building on campus, its elegant massing and detailing have made it a cherished element of the campus. Indoor spaces were last renovated in the 1970s and are due for renovation. In the short to medium term, improvements should be made to the building's ventilation systems, outdoor ramps, accessibility, indoor layout and appearance. The opportunity also exists to move the department of Family and Nutritional Science closer to other scientific disciplines, for example in Cass Science Hall or Duffy Science Centre. Dalton Hall could then become entirely devoted to non-technical programmes.





Small Academic Building by Dalton Hall (C-4)

A small site exists between Dalton Hall and the Robertson Library, capable of accommodating a small building that would further frame the proposed north-south allée. This site could accommodate a building that requires separation from neighbouring buildings and a small footprint. This site had been slated for a two-storey Marine Health Facility in 1982, but the project did not proceed⁴. A highly luminous façade would adequately respond to the new Library Entrance Addition (C-6, page 32) and create a strong anchor in the south east corner of the original quadrangle. Due to its central location, this building may be suited for a research and/or academic use. The design of this facility should be consistent with the character and materials of other buildings in the Heritage Quad.

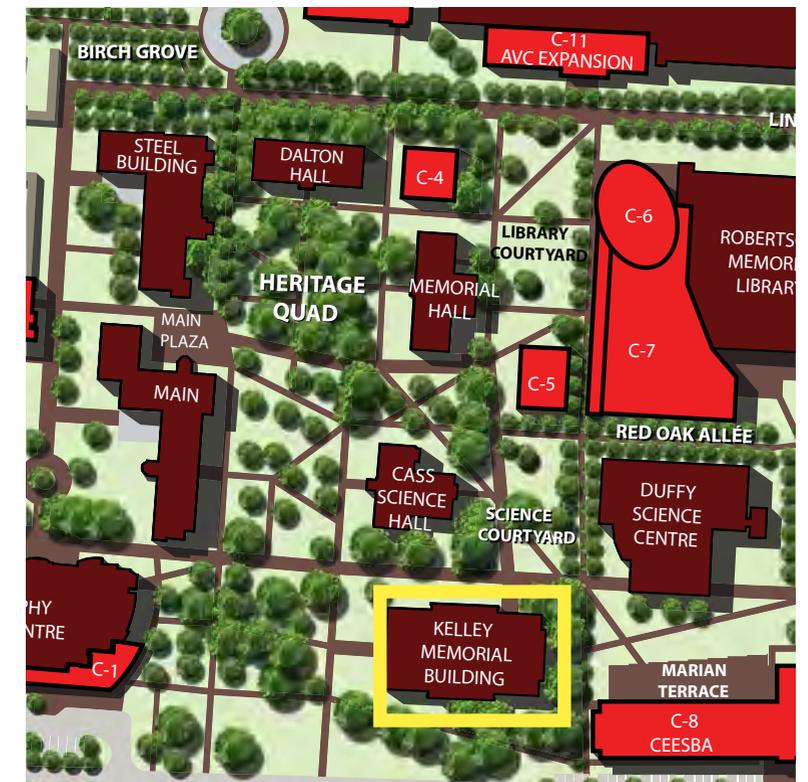
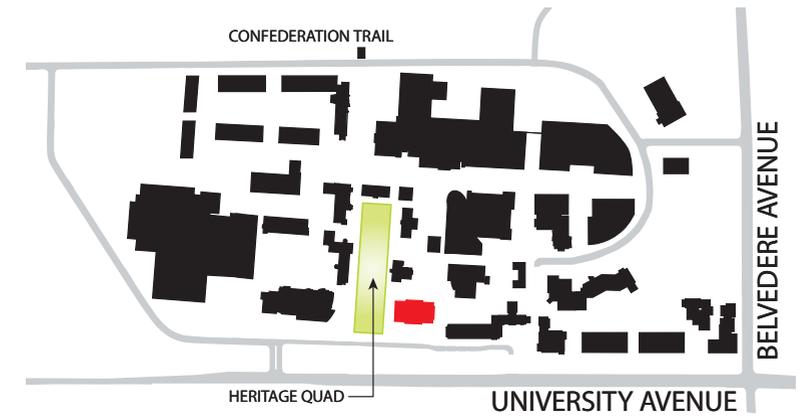
⁴Source: “UPEI Seeking Funding For Marine Health Facility” JP Jan. 12, 1983

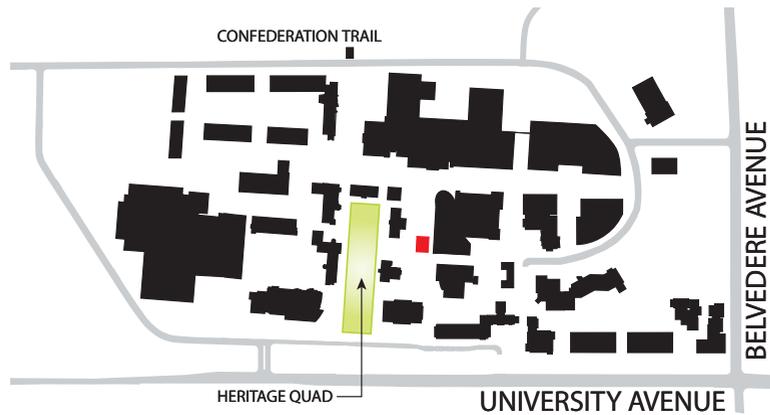


Kelley Memorial Building

With the relocation of the School of Business Administration to Marian Hall, it is proposed that in the short to medium term, the Kelley Memorial Building become a hub for administrative uses, allowing uses currently located in Main Building and Dalton Hall, including Advancement Services and the Office of Research and Development, to join existing administrative functions that presently occupy Kelley. With all of UPEI's administrative units under one roof, there is an opportunity to offer a single service window to students. Existing teaching areas should be retained as a campus-wide resource.

Ultimately, the Kelley Memorial Building does not warrant a complete renovation and should be replaced with a new building that addresses University Avenue and the Heritage Quad in a more compelling fashion. The new building should provide a ground floor located at grade to enhance accessibility with multiple entrances.

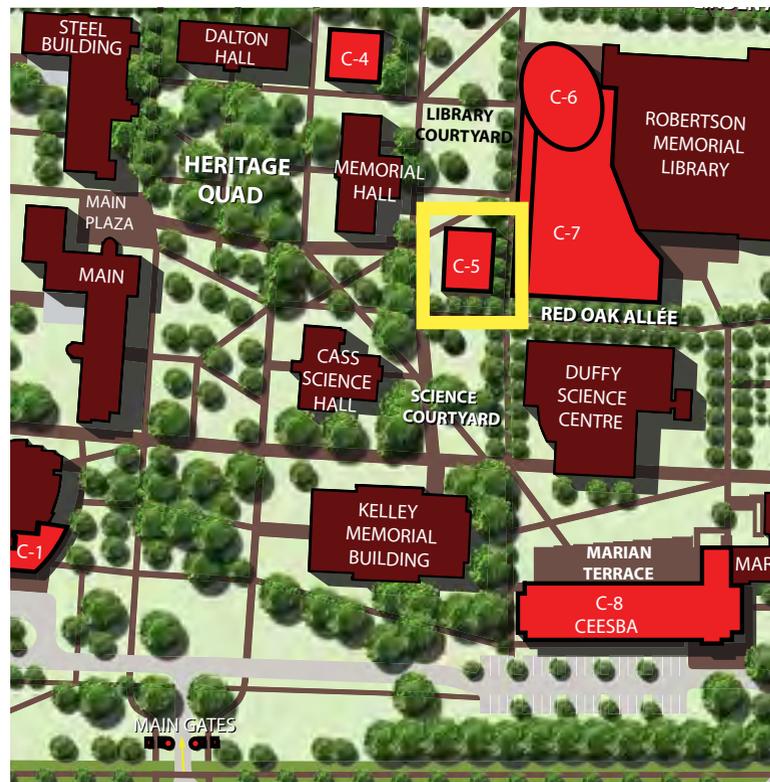




New Chaplaincy Centre (C-5)

The existing chaplaincy centre opened in 1965 as the Student Union Coffee Shop. As the Chaplaincy Centre, its use remains an important component of the University and benefits from a prime location on campus, but in the long-term, this building should be replaced with a new facility.

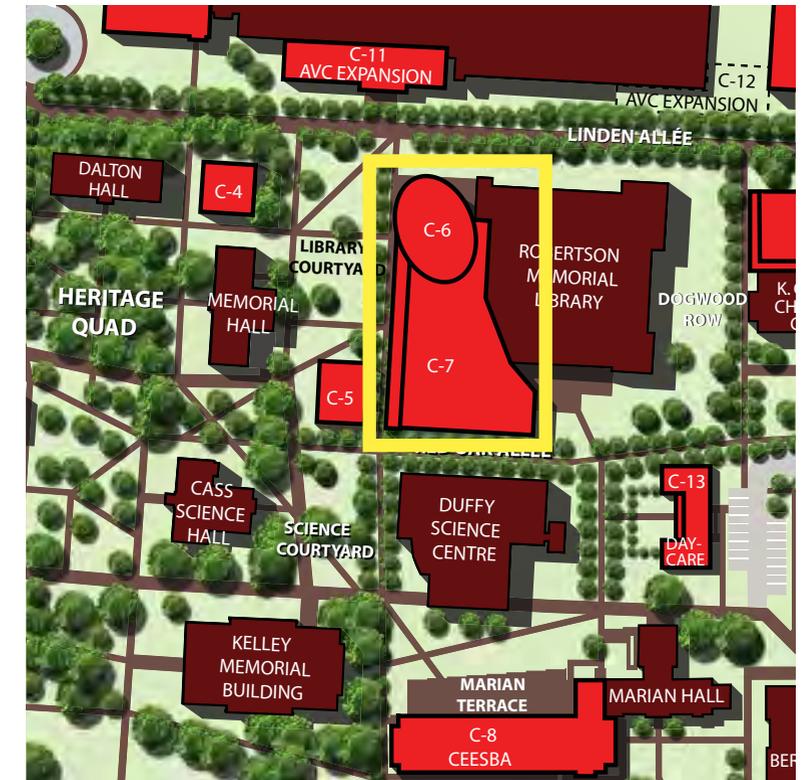
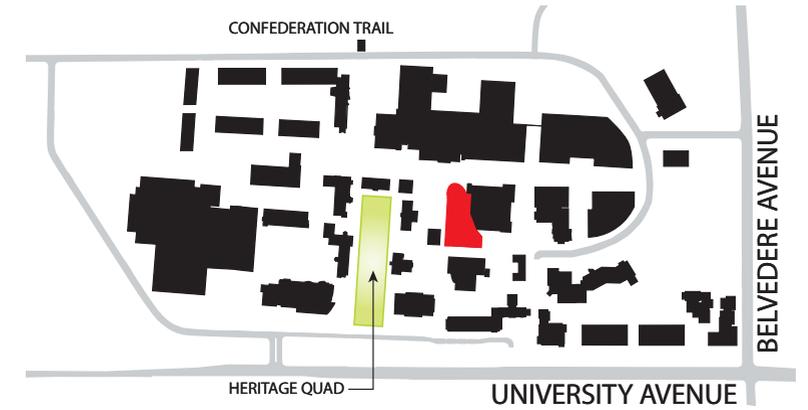
It is therefore proposed that a new building replace the Chaplaincy Centre with a series of multi-purpose and multi-denominational assembly spaces for both religious and non-religious events. The new building should feature extensive glazing to act as a welcoming beacon on campus and should be relocated slightly east to allow a new north-south pathway aligned with the east side of the Duffy Science Centre to terminate at the Main Building. Instead of a split-level design, the new building should feature a full floor at grade for enhanced visibility and accessibility.

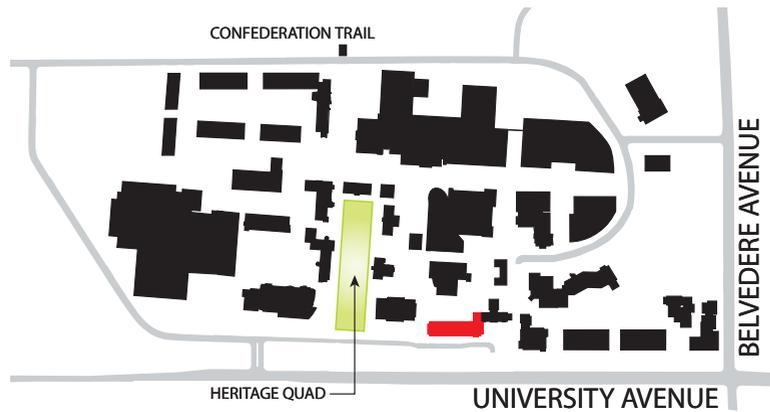


Library Addition and New Building Site (C-6, C-7)

A new building site is possible on the north side of the Library. The ground floor of this building could be considered as an open two-storey space associated with the Library for an “Information Commons” where students could research the collections and use computers for their work. The new space would be combined with the existing entrance to the Library and unused food court, the “Pit”, the Math Help Centre and “The Write Place”, to provide additional meeting spaces and food services. The new ground floor may also provide opportunities to display UPEI’s art collection.

Another addition may be possible as a vertical expansion of the single-storey portion of the Library building on its western side. This addition would enable the Library to better accommodate existing collections and provide for future growth. The new building will help define the Library Courtyard. A continuous breezeway is proposed to be located on the north side of this complex.



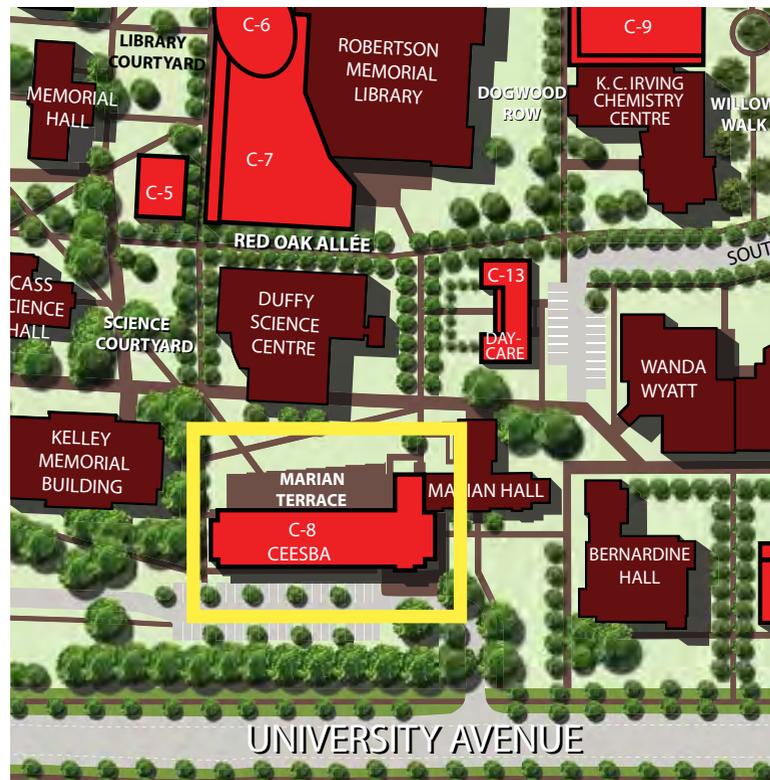


Marian Hall and The Centre for Enterprise and Entrepreneurship (CEE) (C-8)

It is proposed that the residential use of Marian Hall be relocated, the Daycare relocated, and the building converted and expanded to house the Centre for Enterprise and Entrepreneurship and School of Business Administration (CEESBA). This option is recommended over the renovation of the Kelley Memorial Building and construction of an addition to that building, as the condition, appearance, size and location of Marian Hall are more conducive to this project than the Kelley Memorial Building, which should ultimately be replaced.

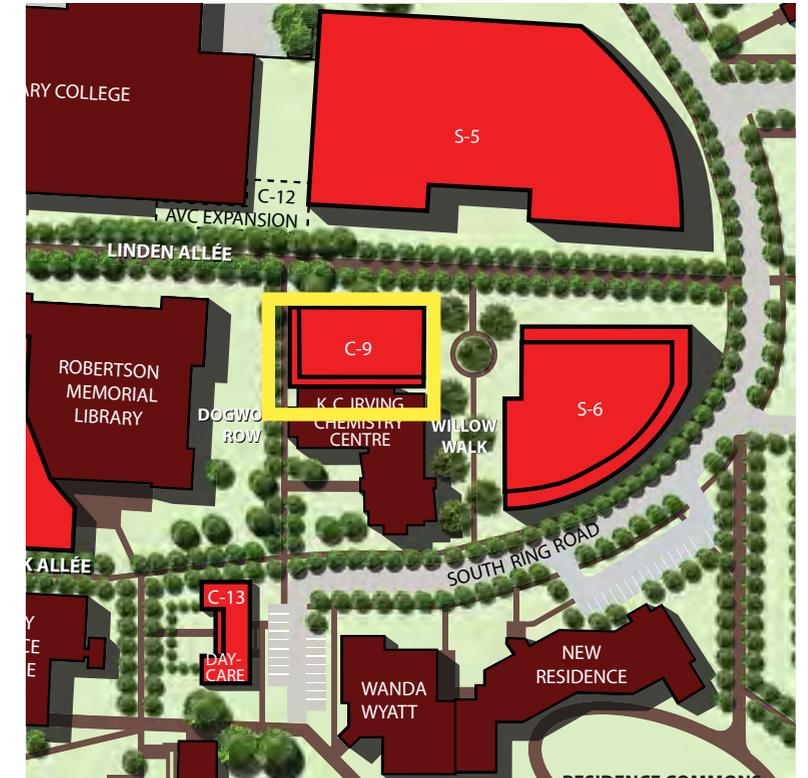
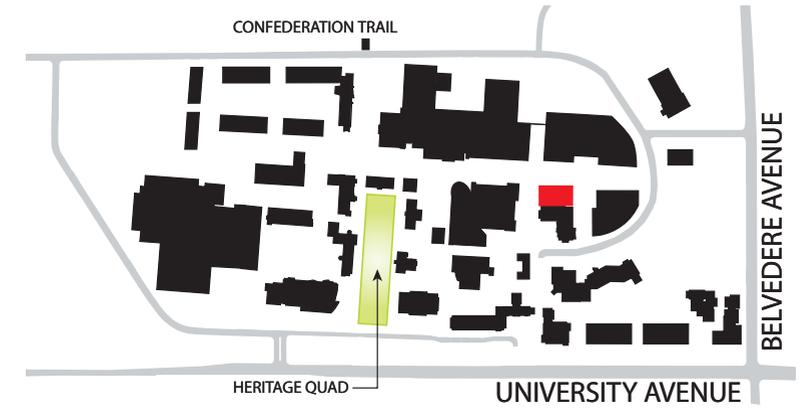
Marian Hall should be renovated to provide new office and teaching space – internally linked to the Centre for Enterprise and Entrepreneurship building. The Centre for Enterprise and Entrepreneurship and the School of Business Administration will effectively operate as one facility sharing meeting areas, theatres, training and conference areas.

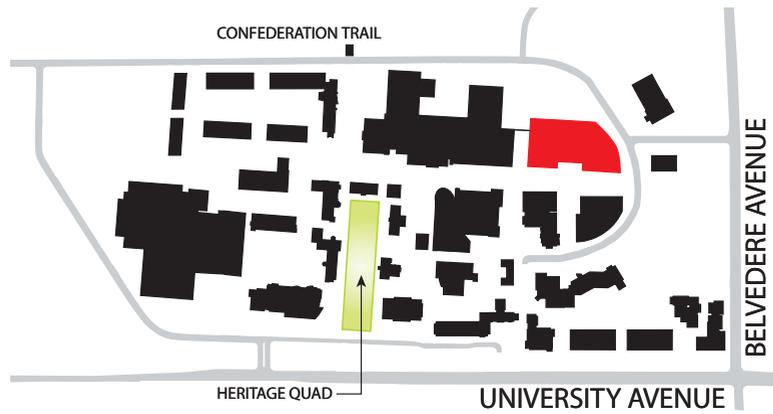
Marian Hall's distinguished heritage presence on University Avenue provides a strong identity and will encourage new opportunities for strategic partnerships between the University, business and other stakeholders. For example, Marian Hall provides the opportunity to accommodate other community-oriented departments and facilities including the University's Life Long Learning program. The building will frame Marian Courtyard between the Duffy Science Centre and the Kelley Memorial Building.



KC Irving Expansion (C-9)

K.C.Irving Chemistry Centre lends itself well to an addition on its east side. It is proposed that the addition be linked to the existing building by a glazed atrium. A colonnade or breezeway is proposed on the north side of the building that looks onto the proposed Dogwood Row.

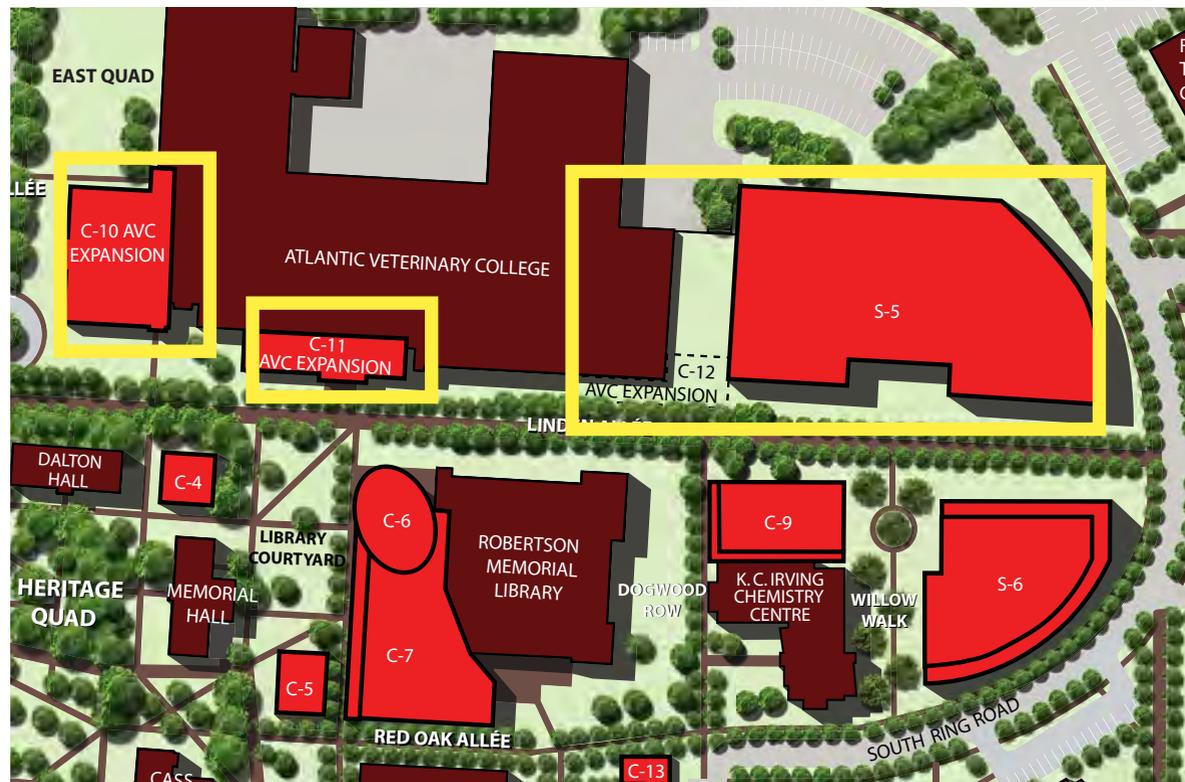




AVC Expansions (C-10 to C-12 and S-5)

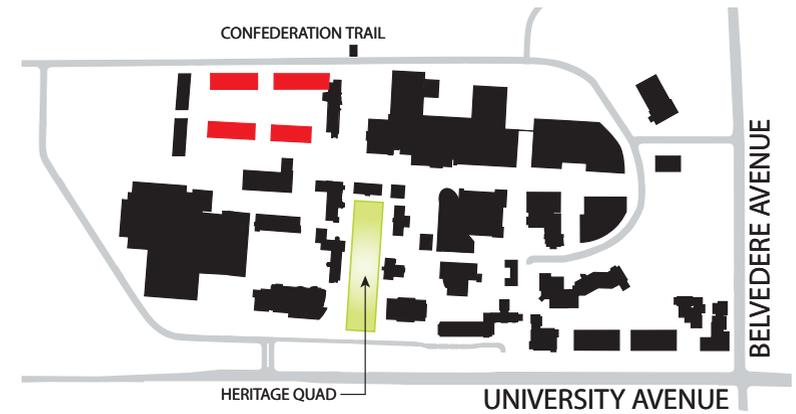
In addition to expansions already planned for to the north and west of the AVC, a substantial new building is proposed to the south of the existing building. This addition would be oriented to take advantage of views of the City and would frame the Linden Allée which will be extended to Belvedere Avenue. The west side of the building should incorporate a complex linking this new building to the existing AVC. This large building should include its own highly visible communal space on the ground floor.

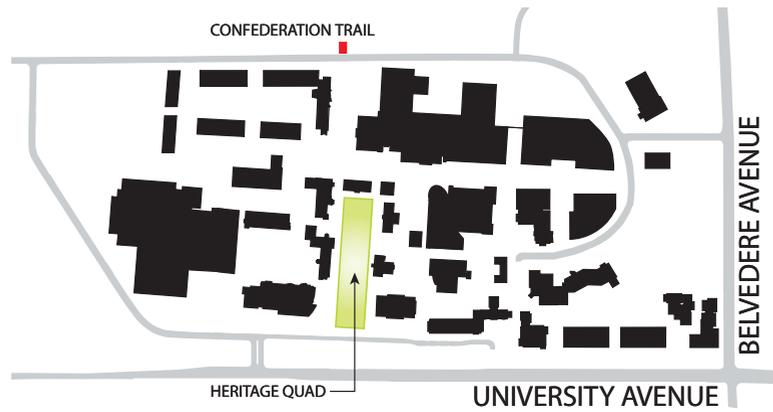
The C-12 site should be reviewed for its potential to accommodate below-grade parking and deck parking to the east.



Buildings on the Green (C-14 to C-19)

These buildings take advantage of a prime site on campus, in close vicinity to the original quad and the new Institute for Nutrisciences and Health. They would feature a similar long and narrow footprint to the INH to ensure that most indoor spaces have access to natural light. Buildings would be positioned so as to allow pedestrians travelling to and from parking facilities to walk indoors during the colder months and overlook the proposed open space system. On the ground floors of at least one of the buildings, near the main entrance, amenities such as a coffee shop and convenience store should be provided. Each building should incorporate a highly-visible lobby where building users can congregate and socialize.





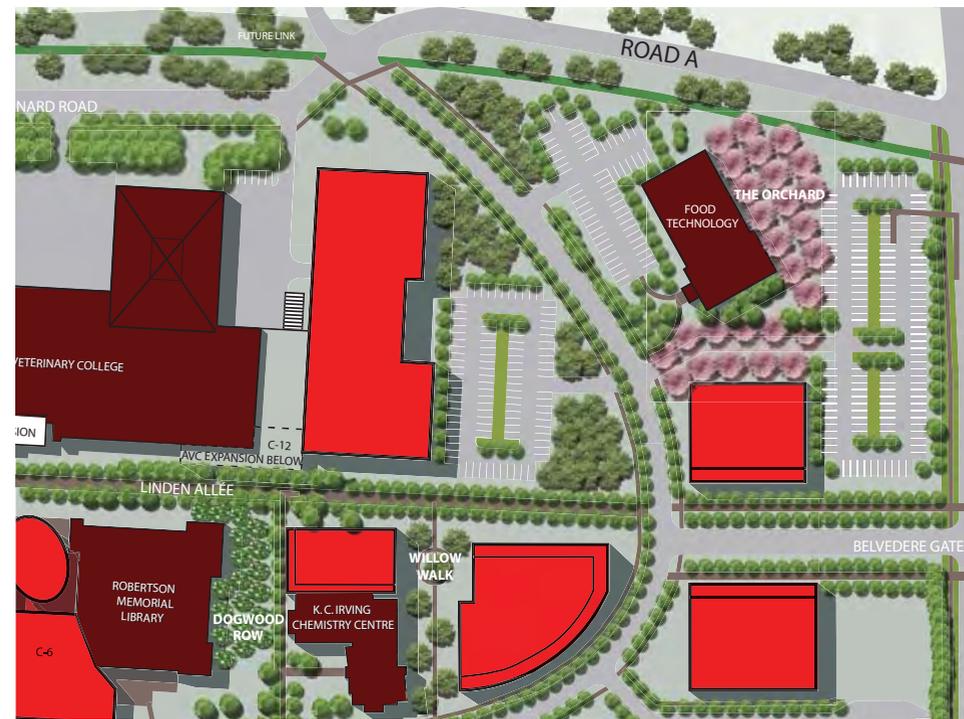
Trail Pavilion (C-20)

A bridge and trail pavilion are proposed as UPEI's marker on Confederation Trail. This amenity would encourage trail users to pause, rest, learn about UPEI's history and visit the Campus.





Option 2



Option 3

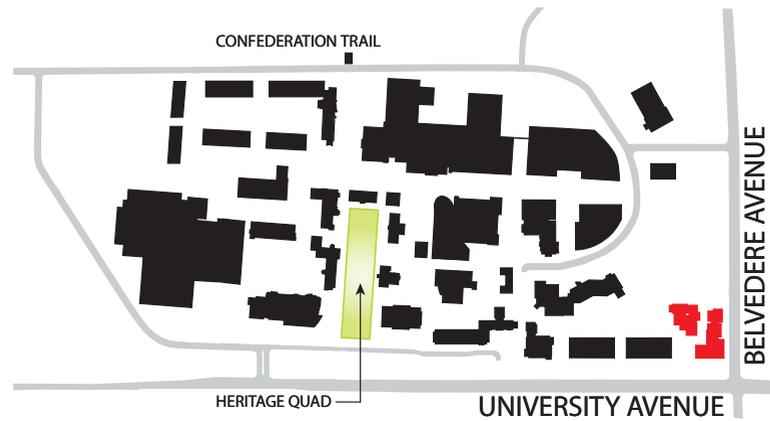
The exit of the Perimeter Road onto Belvedere is currently located just west of the Food Technology Centre. This road – which is proposed to be named Belvedere Gate - represents both an inefficient and unsafe intersection and should become a signalized intersection in the near future. An additional consideration is the need to create a safe crossing for the Confederation Trail. The optimal location of the road has been reconsidered in the Plan and three options are proposed.

Option 1 illustrates the existing location of Belvedere Gate, proposed to become a signalized intersection at Belvedere Avenue.

Option 2 relocates Belvedere Gate further to the west to align with the extension of the Linden Allée. A full four-way signalized intersection will provide a safe pedestrian crossing from the Farmer’s Market and Experimental Farm as well as improve traffic flow for vehicles to and from the University. By virtue of greater separation between this proposed intersection and the Confederation Trail crossing, there may be an opportunity to provide a pedestrian activated signal on Belvedere Ave. for Trail users.

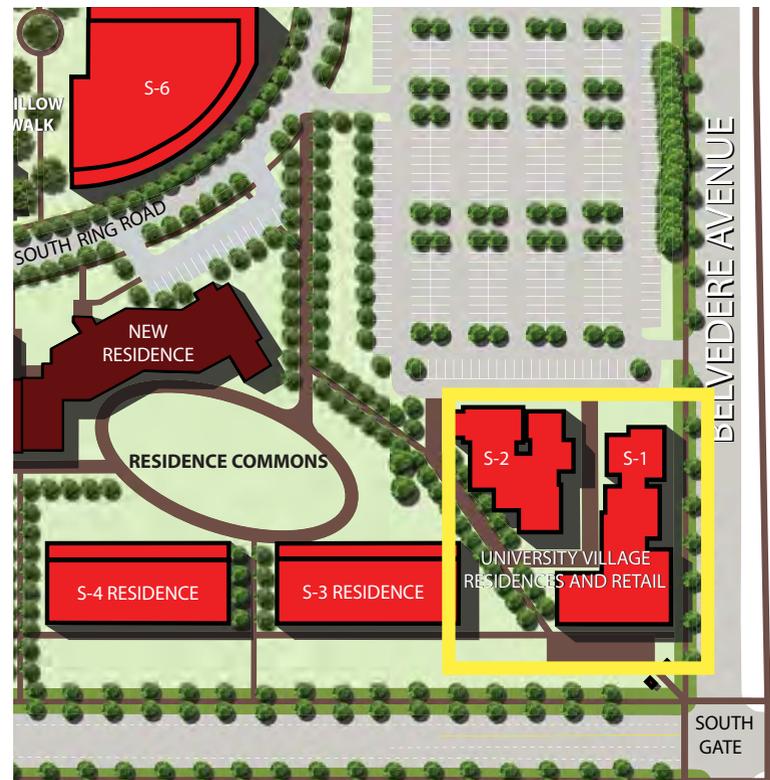
Alternatively, the Trail crossing and intersection can be combined by shifting the access point to the east as proposed in Option 3. In this configuration, Road ‘A’ becomes the access road from Belvedere Avenue. This scenario has the advantage of combining a signalized intersection with consolidated pedestrian crossings in a location roughly mid-block between University Avenue and Mt. Edward Road. However, the land area required east of the Food Technology Centre is not owned by the University and will require an easement agreement between UPEI and the Canadian Food Inspection Agency. In this scenario a secondary entrance with a right-in, right-out access only should be provided in the same location as proposed in Option 1 (flanking the Linden Allée extension).

Prior to the installation of a signal on Belvedere Ave., the location of Belvedere Gate should be adjusted in accordance with either of these options.



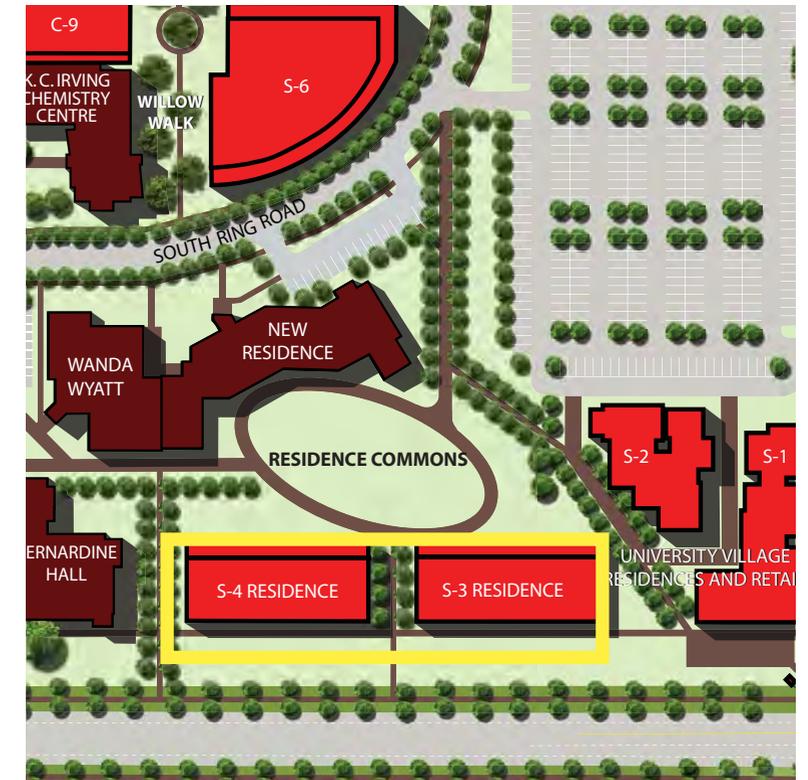
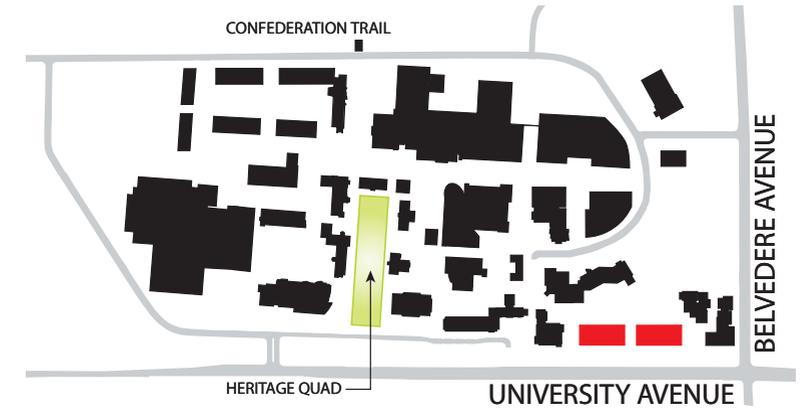
Residence Cluster (S-1, S-2)

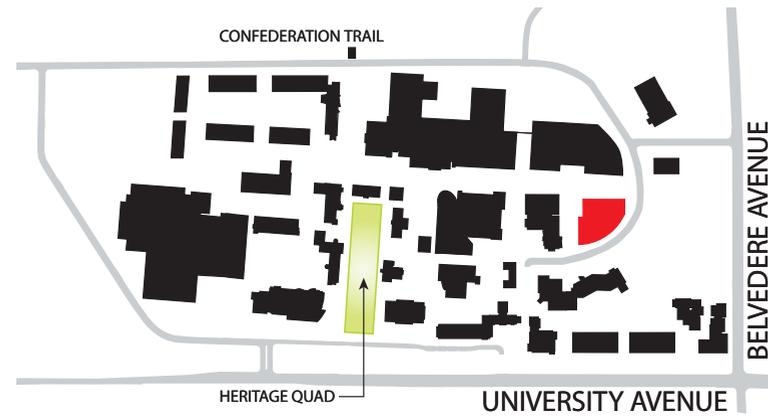
As a long-term objective, the University is encouraged to partner with landowners on the northeast corner of the Belvedere and University Avenue intersection to redevelop the site. This intersection is an important gateway to the campus and is suitable for a more attractive and intensified building complex. However, the provision of retail and food services in this location is desirable as it offers residents a range of choices on campus. The redevelopment of this area may be conceived as a mixed-use village, providing commercial uses on the ground floor with residences above. A cluster of three to four-storey house-form buildings may be grouped along an internal ‘mews’. A landscaped plaza area is proposed at the intersection providing an outdoor café terrace in the summer months. A stone gateway structure that incorporates University signage should be located at this corner.



New Residences (S-3 and S-4)

As UPEI attracts students from other provinces and countries, the promise of modern on-campus accommodation could become a key competitive advantage for UPEI. Two residence buildings are proposed in this location to replace Blanchard Hall at some point in the future. Residences can also be used to house conference attendees in the summer months. Two new buildings are proposed to be sited facing onto University Avenue and forming a new Residence Commons Area.





S-6 Site

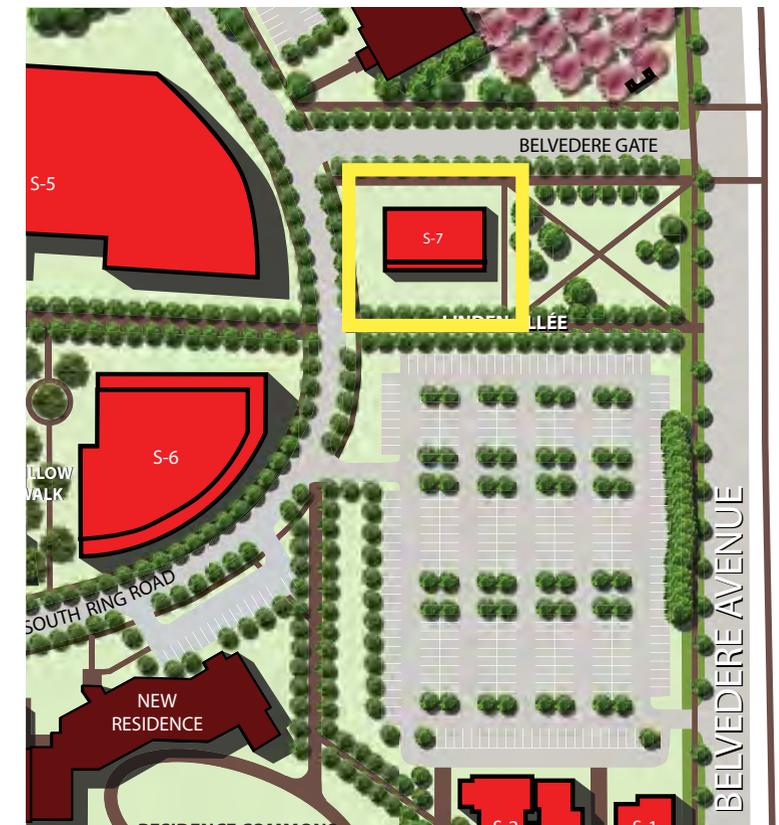
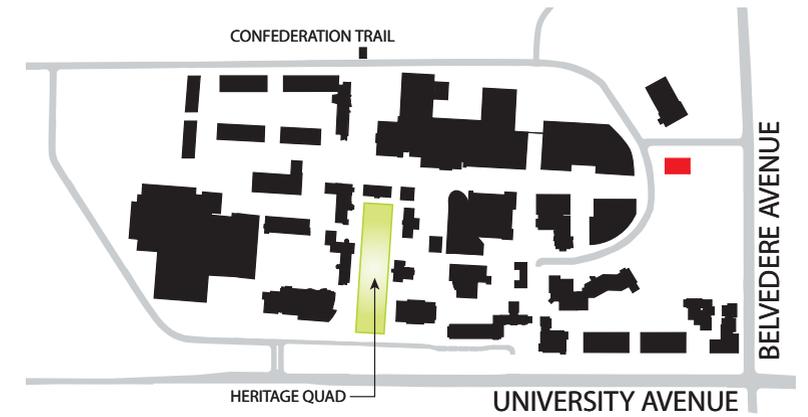
South of the K.C. Irving Chemistry Centre, a new building that faces onto a new internal ring road is proposed. This building should feature a wrap-around colonnade or breezeway on its east, west and south sides and should mark the entrance to the campus with a landmark feature at the south wall.

The footprint and location of this building make the inclusion of an underground parking facility a possibility to study further at the planning stage.



S-7 Site

This building will frame both Belvedere Gate and the extension of the Linden Allée, and will provide a gateway to the South Campus.



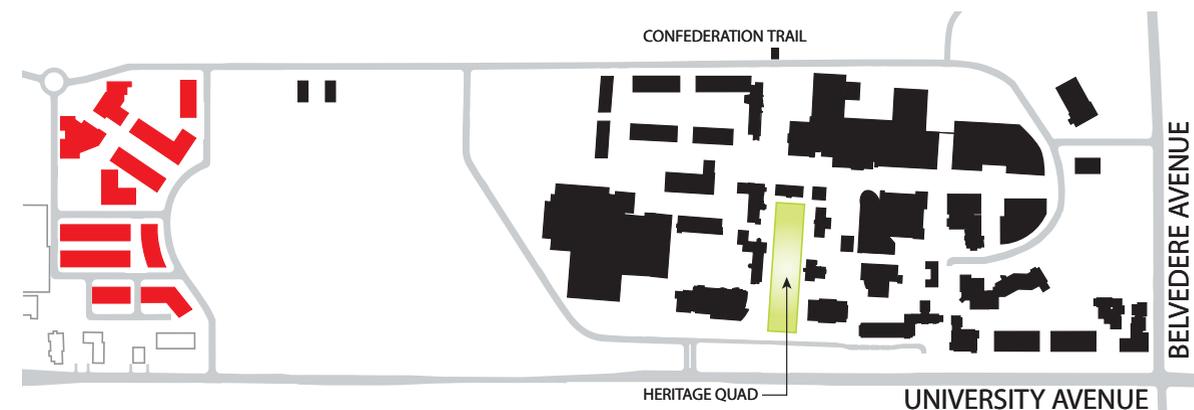
2.4.3 The North Campus

The North Campus is currently undeveloped, except for sports fields in proximity to the CARI facility and the Chi-Wan Young Sports Centre. The environmentally sensitive central area is shaped like a bowl where water accumulates and a pond forms seasonally. Trails that traverse the lands are used by the University community, but otherwise no direct road access at grade currently exists to these lands. This large natural area - called the Pond - is an important open space component in the larger regional context of an interconnected watershed and trail network. It also acts as an important visual amenity and foreground to the Campus as one approaches from University Avenue. Recognizing its value as a natural asset the central area of the North Campus is a priority area for preservation and enhancement.

One of the existing two Sports Fields are proposed to be upgraded with an artificial turf surface potentially providing bleachers and support facilities in the future. A new parking area is proposed east of the fields to replace parking lots displaced in the core area as new development occurs. The Equipment Depot, presently located to the west of the Central Utility Building, may be relocated to the North Campus adjacent to the power sub-station. Both the sub-station and Equipment Depot should be well screened with trees, berms and planting.

Future development is proposed wrapping around the periphery of the Pond served by a new road network connecting to the north (and a possible link to Mt. Edward Road via a privately held roadway) and to University Avenue.

The Plan proposes options in terms of appropriate land uses for this area recognizing its position beyond the ten minute walking distance from the academic core. In particular, this area is well suited for land-lease development for uses that complement the University and can provide a stable source of revenue. The Plan illustrates the potential for this area to become a senior's life-lease community comprised of both low-rise house scale buildings as well as apartment type housing arranged around the Pond area as the key amenity of the development. The proximity to shopping, the CARI facility and the University - for life-long learning - would make this location ideal for a senior's complex. Alternatively, a second option illustrates the potential for future University buildings, such as graduate departments, to be located in the north campus. This land is an important long-term asset to the University and should be retained in perpetuity, though long-term leasing of portions of the lands may be considered as a revenue source.



Option illustrating residential uses.



Option illustrating institutional uses.

3 Built Form
and
Architectural
Character





The proposed CEESBA

3.1 Objectives

The goal of the following design guidelines for the UPEI campus is to strengthen the heritage core area while providing flexibility for contemporary design for areas beyond the Heritage District.

The guidelines will also ensure that new and future additions adequately complement existing built form while expressing the modern orientation of the institution and responding to programmatic needs. Renovations and new development are opportunities to preserve the character of the Heritage Core Area while providing an opportunity for contemporary architectural exploration and originality in the remaining areas of the Campus. Increasingly, the appearance of a campus is used as a marketing and recruiting tool. An attractive, high quality campus becomes a crucial competitive tool.

While new projects are driven by programmatic requirements and funding considerations, each project carries a responsibility to the greater UPEI campus. To achieve this objective, it is incumbent upon the design team to invest in an understanding of the broader campus beyond the immediate project and program goals. The team must understand the history of architecture and planning on campus, the current campus master plan and, particularly, the immediate context of the building site.

At the same time, it is critical that the University dedicate adequate and appropriate capital resources to new projects to enable them to properly address the complex requirements to produce buildings and landscapes of excellence.

All new buildings and renovations should be built based on principles of sustainability. The LEED® (Leadership in Energy and Environmental Design) rating system provides detailed guidance on how to create sustainable buildings. Because of the comprehensiveness and constant updating, principles and guidelines contained in the LEED rating systems have generally not been replicated here.

3.2 Opportunities for Enhanced Campus Life

Consultation exercises and interviews revealed that beyond bricks and mortar, the Campus Plan should identify a range of opportunities to enhance campus life and the quality of life of campus users. Most of the following opportunities have been suggested by interviewees and consultation participants:

3.2.1 An enhanced cultural scene on campus

UPEI could carve itself a desirable niche by cultivating a rich cultural scene on campus, focused on a number of audiences including the campus community, Charlottetown area residents and summertime tourists looking for a break from traditional summer activities. While strategic support and organization are key to the success of this concept, adequate facilities are needed to support this vision. Through the consultation process for the campus plan, strong support has emerged in the campus community for the future development of a multi-purpose theatre with a capacity of 400-500 seats, bridging the existing gap between much smaller facilities and Confederation Centre, with 1,100 seats. In addition, an Art Gallery or other suitable exhibition space would create opportunities to display UPEI's existing art collection and encourage donations. More generally, UPEI should continue to play an important role in hosting cultural events of interest for the community and for this purpose provide a range of multipurpose facilities that can be used creatively and efficiently.

3.2.2 A Full-Time Medical Clinic

A full-time medical clinic would assist in the recruitment of employees by allied research organizations on campus and new faculty who may otherwise be concerned about access to a family doctor. While space is already available in the WA Murphy Student Centre, a new location in the Athletic Centre or CARI Facility, coupled with a physiotherapy clinic, could provide a more comprehensive service to both the campus and the wider community.

3.2.3 Conference Facilities

Improvements to conference and meeting facilities were often mentioned as an important outreach initiative for UPEI, including:

- Stronger and more elaborate processes to organize events;
- Graphic standards to ensure that all signage is visually consistent and appealing;
- Consistently high standards required of service providers to ensure the quality and professionalism of events;
- Focus on hosting of events with inherent connections to the university community, while taking care not to undermine private-sector providers in Charlottetown.

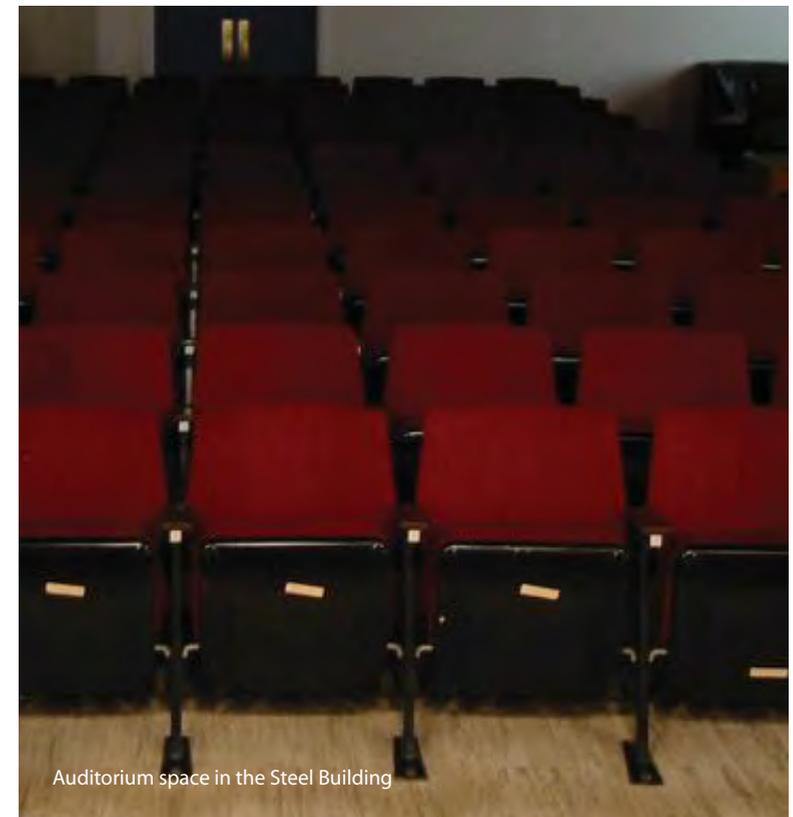
3.2.4 Campus-wide wireless access

Campus-wide wireless access would allow users of the campus to completely reconsider space. No longer would they be tethered to desks, but would be empowered to move freely and turn unused space anywhere on campus into a workstation. Impromptu meetings can take place with the ability to remain connected to one's files and the Internet.

The flexibility granted by this technology renders every square foot of space into useful and productive space, leading to opportunities to remove redundancies. For example, the boundary between study spaces, group study rooms, computer labs and lounges becomes blurred.



Recital space in the Steel Building



Auditorium space in the Steel Building



UPEI has made great progress in the accommodation of persons with disabilities, but more can be done.

3.3 Accessibility

Context

In 2005, thirteen percent of the working age population reports having a disability and seven percent of the student population are disabled. Obstacles remain for disabled students to access post-secondary education in many Canadian universities.

UPEI, with its mostly flat terrain, does not present the same challenges as other Atlantic universities, although some older buildings require retrofitting for accessibility needs.

The issue of accessibility at UPEI is not new. A 1974 article entitled “Survey reveals UPEI inaccessible to wheelchairs” discusses the results of a survey conducted at UPEI which found that many buildings remain inaccessible to users in wheelchairs and that “renovations will be made when money from the budget becomes available.”

An accessibility committee was formed in 1998, and is actively working towards improving conditions on campus for existing and potential students with disabilities. UPEI is now a leader on accessibility matters in PEI and its initiatives are closely watched by school boards.

The concept of accessibility for persons with disabilities has been considerably broadened to include all types of barriers, including learning disabilities but the emphasis of this Plan is on the physical realm and hence physical barriers will be addressed here.

Barrier-Free Design

Barrier-free design should become a priority in every new construction and renovation project. A review mechanism should exist as part of the decision-making process to ensure that all reasonable opportunities to improve accessibility are pursued before design is finalized.

Planning for barrier-free design will result in significant savings by ensuring that necessary accessibility features are embedded in an original design rather than as a retrofit. Integrating barrier-free design early in campus planning processes raises costs marginally, while retrofits tend to be complicated and costly.

3.4 Guidelines

3.4.1 Elements to incorporate in new buildings

The construction of new buildings provides an opportunity to address campus-wide needs, including:

Storage

It is important to incorporate needs for storage at the design stage of new buildings. In addition, when a shortage of purpose-built storage space exists (e.g. purpose-built space in a warehouse or basement), premium academic space in academic buildings tends to be used for storage at the expense of more appropriate uses.

Information Technology Facilities

Another important type of space to incorporate at the design stage of buildings is space for telecommunications and computer equipment to ensure that adequate redundancy, security and space for growth are provided.

Sustainability

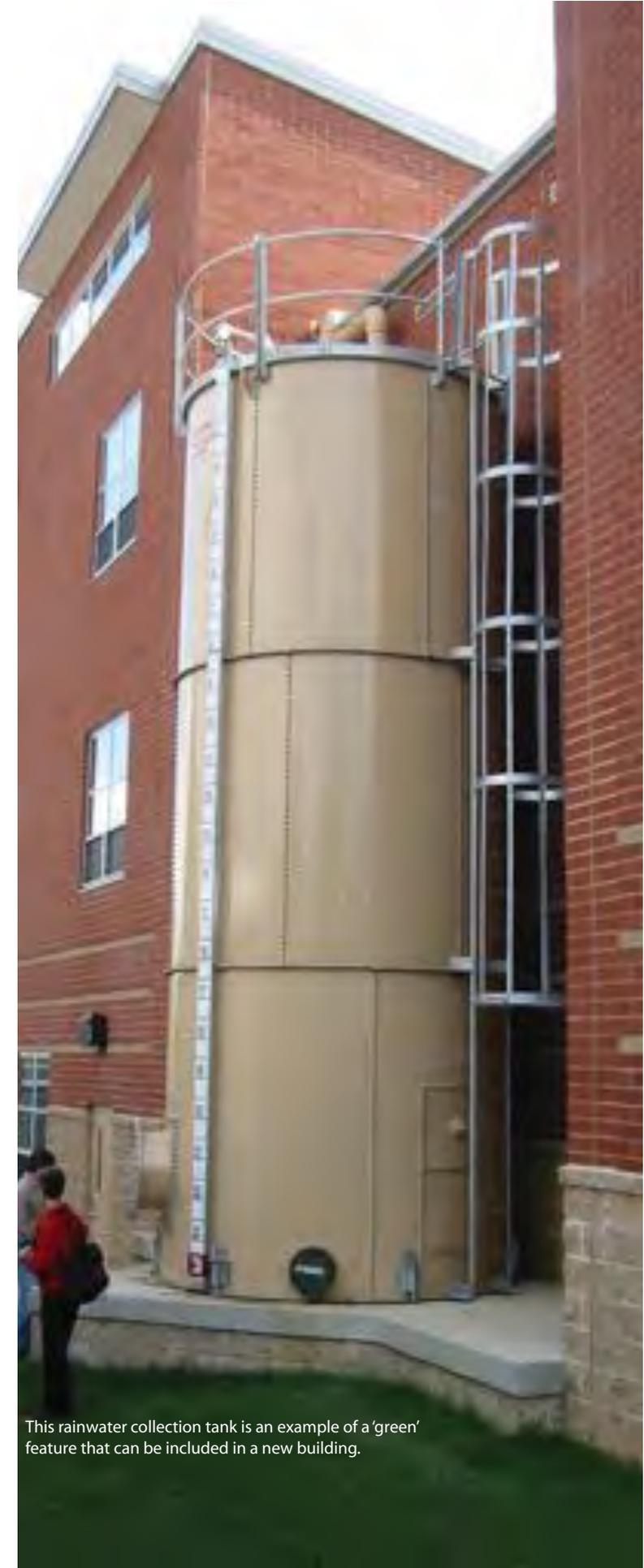
As described in more detail in Section 6, the long-term sustainability of new projects – construction and renovation – must be considered at the onset of the design process to minimize costs and surprises.

Accessibility

Finally, accessibility for people with disabilities should be woven into the design of each building at the onset of the design process. Incorporating accessibility features at early design stages is less costly than retrofits.



It is much more cost-effective and visually attractive to design accessibility features at the time of initial construction instead of retrofitting.



This rainwater collection tank is an example of a 'green' feature that can be included in a new building.



A contemporary glass and steel canopy enhances the entrance of Queen's University's Douglas Library, a nineteenth-century limestone building.

Brook McIlroy Inc



The Bass Centre at Yale University provides an example of design that acknowledges historic scale yet has been designed as a contemporary structure.

3.4.2 Sensitivity to Heritage

UPEI is fortunate to have a number of historically and architecturally significant buildings on campus. Each building in its own way contributes to the character of the campus. Therefore, each building and its heritage character, needs to be individually reviewed on its own merits.

The following principles should be observed:

- **Heritage designation should not be limited to the oldest buildings on campus. Each building, regardless of age, should be respected as a coherent whole. Each new building should be designed to become a heritage building in the future.**
- Generally, distinctive heritage elements and character should be preserved and enhanced.
- Deteriorated architectural features should be repaired rather than replaced where possible.
- Where replacement is necessary, the new material should match the original in terms of materials, colour, texture, and design.
- Repair or replacement should be based on research related to the original design and construction method.
- Prior to undertaking repairs, a complete record of the architectural features of the building should be compiled. This will provide an invaluable record should any feature be damaged or lost during the repair work.
- Design for alterations and additions in the heritage core should complement the heritage context and should employ similar materials (red brick), building heights and massing.

3.4.3 Scale and Massing

The scale and massing of buildings on campus greatly influences the “sense of place” on campus. While proportion refers to the relationship of dimensions of forms and space, scale refers to how the size of the building elements are perceived relative to proportions of the human body. The roofline, proportion and visual mass of a building affect the overall building form and, when consistent, a high degree of unity between buildings on campus can emerge, even if a variety of architectural styles coexist.

The original campus buildings tend to be symmetrical in plan. Roofs are gabled and hipped, cascading down from the higher building forms to the edges of buildings. Floor plates are narrow to capture both cross ventilation and sunlight.

Although they have retained a characteristic assembly of forms, recent buildings often display an asymmetrical plan.

While it is acknowledged that all projects are unique and therefore require specific and individual attention, there are a number of design principles that should be adhered to.

- The massing of a building should reflect the role it will play among other buildings on campus, for example framing a quad or open space.
- New additions and renovations should incorporate a material palette and composition complementary to the existing structure.
- A building’s scale and massing needs to be proportionate to the architecture currently represented on the UPEI campus.
- Building depths should be narrow where possible to ensure access to natural light and ventilation, particularly for residences.
- In larger buildings, atria should be included to introduce natural light, visual orientation and indoor open spaces to use during winter months.
- Buildings should be located along courtyards to provide shelter from wind and to create human scaled spaces.
- Large and long buildings should incorporate articulations in massing to provide variation that is scaled to complement surrounding buildings.



Different materials define different volumes and functions of this building: the street elevation provides a lower, human scale and open transparency.



Glazing in the WA Murphy Student Centre connects the indoors to the outdoors.



Specific building uses are expressed through different architectural volumes so that this large building is read as a collection of smaller buildings.



A canopy provides shade and demarcates this building's entrance.



Example of a university building that incorporates a breezeway - an interior walkway that is open in the summer, but enclosed with glass doors in the winter.



The main floor of this building features expansive window areas which assist in creating animated and safe outdoor areas and pathways.

- Buildings should be tall enough to define adjoining spaces. This will generally require at least a 3 storey or approx. 14 m. building height. In order to not overwhelm existing structures and minimize shadows, the maximum recommended building height should be six storeys or 25 metres.
- Buildings above four floors should feature a setback to reduce the perception of height from the ground.
- Taller landmark elements should be used to terminate important view corridors and mark main building entrances.
- Designs of new structures should express the highest standards of contemporary design.
- New buildings should avoid literal duplication of heritage styles. Instead, a building's massing, elements and materials should reinforce and be compatible with existing architecture.
- Interior design should consider flexibility to ensure a variety of potential space uses.

3.4.4 Façades

- Buildings should be visually engaging and transparent at the ground level and, where possible, integrate sheltering elements for pedestrians such as canopies, breezeways and colonnades.
- The use of bright and vibrant colours can be used to enliven buildings, but this should be limited to key interior spaces that are visible from the outdoors through large windows.
- Preferred materials for buildings in the Heritage Core include natural stone, brick, synthetic stone and wood. Buildings outside the Heritage Core should consider, in addition to the above materials, pre-cast concrete, copper and metal curtain wall systems.
- Façades should incorporate, where appropriate, projections, recesses or windows to articulate the façade and provide relief to long and flat surfaces. These articulations should coincide and mark public areas of the building such as lounges, meeting rooms and cafés.
- Windows should facilitate two-way visual connections between indoor and outdoor areas through the use of clear glass. Tinted and mirrored glass should be avoided.

- Architectural detailing should be used to highlight window and door frames, cornices and corners.
- Where blank walls are necessary, they should feature changes in materials or texture, such as projecting brick patterns.
- Dated corner stones, dedications, building names and other inscriptions should be used to visually convey the history of the campus.
- In general, stucco, metal and vinyl siding should be avoided. Residential buildings in the North Campus may be exempt from these restrictions but should be designed to complement the dignified, high-quality character of the Campus.

3.4.5 Roof forms and materials

- Rooflines should emphasize main entrances and visual termini.
- Both sloped roofs and flat roofs are acceptable.
- Where flat roofs are used, projections or setbacks may be used to distinguish the roof from the façade.
- The colour of roofing materials should reflect a natural palette. On sloped roofs, only high quality materials should be used, including standing seam metal roofing, copper, lead coated copper, zinc and slate and wood shakes to reflect the vernacular Island building practice.
- Planted or “green” roofs should be encouraged as they keep water away from stormwater sewers and absorb carbon dioxide.
- Rooftop mechanical equipment should be fully enclosed, set back, or screened and integrated into the architectural composition of the building.
- Roofing materials should be selected for their low environmental impact, such as no or low VOC components.



A deep overhang defines the roof from the façade.



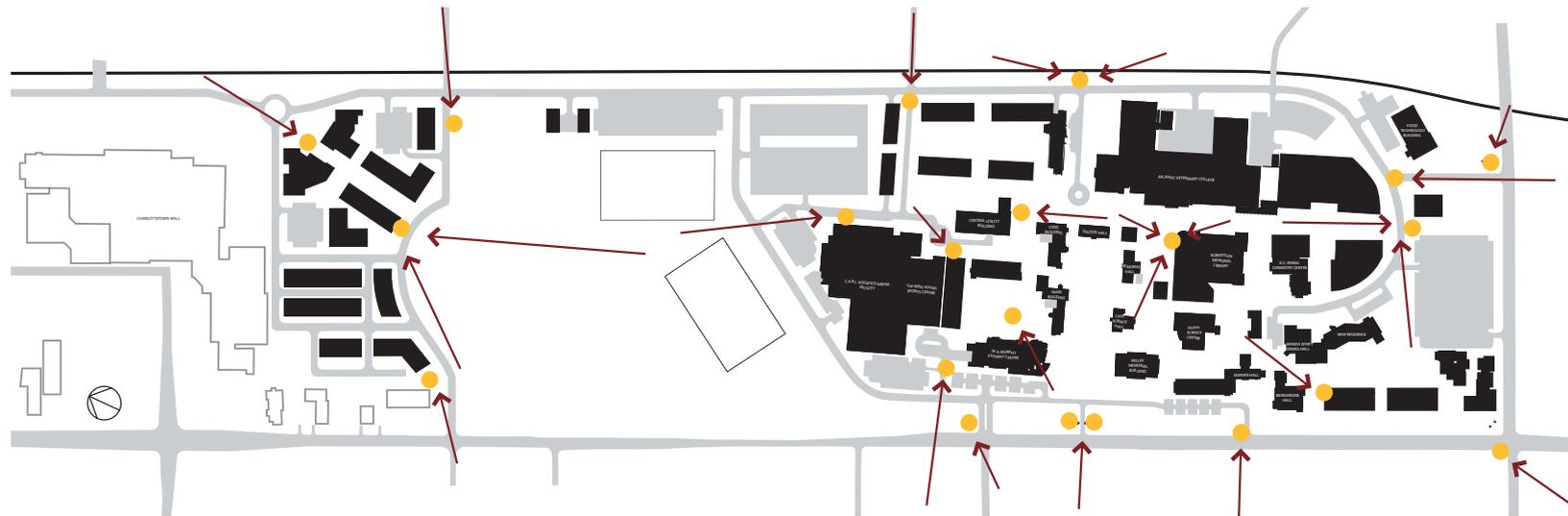
This flat roof is articulated through its cantilevered projection.



A landmark element in the form of a tall clerestory becomes a beacon at night and identifies a building's entrance.



Green roofs should be encouraged for flat roofs.



Opportunities for landmark sites and features are indicated by yellow dots, and view corridors by red arrows.



Glass is used to provide strong visual connection between a campus's indoor and outdoor spaces..

3.4.6 Landmark elements

- Taller landmark elements should be used to mark strategic sites, assist with orientation and create a sense of place. Landmark elements can be located to end views, accentuate primary frontages and mark main entrances.

3.4.7 Entrances

- Entrances should feature clear architectural expression to mark their location and aid with orientation.
- Entrances should reinforce visual termini or key open spaces.
- Entrances should project or be recessed from a façade to articulate the façade and create shadow lines.
- Entrances should be highly transparent, either through the use of a glazed doorway or a solid doorway set into a glazed surround.
- Highly visible signage should be located outside each entrance.
- Entrances should be connected to a social space or lobby to create a sense of arrival and to accommodate informal meetings and awaiting area. Directional information should be provided at the entrance.
- High quality materials including stone, copper and wood and architectural elements such as light fixtures, porches, canopies, colonnades and breezeways should be used to mark entrances.

3.4.8 Orientation and connections to outdoor spaces

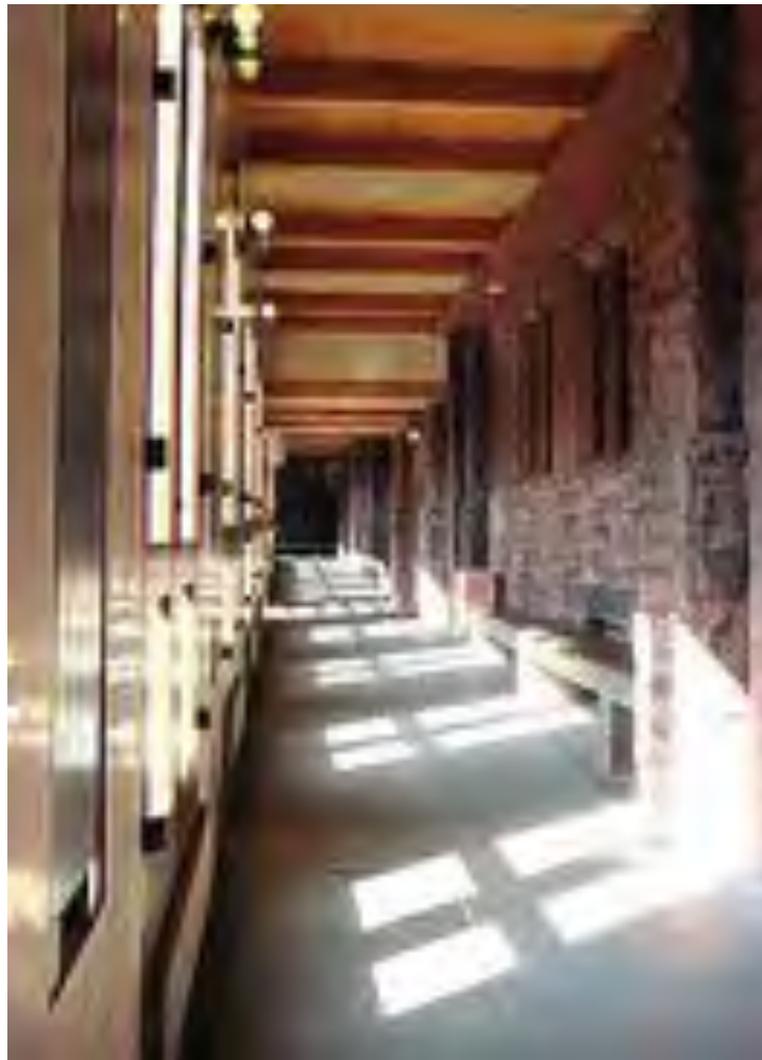
- Buildings should frame streets, pathways and open spaces, just as historic campus buildings frame the Heritage Quad today.
- Main façades should face primary open spaces and paths.
- Ground floors should be designed to encourage active uses that support pedestrian vibrancy.
- Multiple entrances should be provided to encourage permeability, but front doors should respond to main open spaces and paths.
- Hallways and public uses within buildings should clearly connect with outdoor streets and open spaces.

- Where possible, exterior materials should continue into lobbies to aid in pedestrian orientation and navigation.
- Common spaces for studying or socializing should be clearly accessible and provide views to the outdoors to encourage use and enhance the quality of the space.
- Blank façades should be avoided as much as possible, especially at the ground floor level, and should minimize exposure to public areas of the campus like streets, paths and open spaces. Vines and planting design should be used to minimize the negative impact of blank walls.
- Service areas should be located away from public spaces and appropriately screened through planting and fencing composed of materials integral to the architecture of the building.
- The ground floor should be aligned with the exterior grade to maximize accessibility, legibility and permeability. Split-level designs should be avoided.
- To foster a secure campus environment, dead-end spaces should be avoided. The ground level of all buildings should be well-lit and transparent.

3.4.9 Breezeways and Colonnades

A system of interconnected pedestrian walkways should be integrated in all new building projects and added to existing buildings where possible. Located at grade, breezeways create an interface between the indoors and the outdoors. These glazed corridors that run along the outside envelope of buildings can mitigate climatic challenges faced by the campus without jeopardizing the vibrancy of campus life. During the summer months, the breezeways can open up to the outdoors to become a colonnade.

Because tunnels and above-ground pedways remove pedestrian traffic from the ground level, they reduce the animation and safety of the campus. For this reason, at-grade breezeways that flank outdoor courtyards, quads and pathways are preferable.



This breezeway is a new addition to this 19th-century building.



A landmark feature can be used to mark main entrances.



Glass doors open in warm weather to become a colonnade onto an enclosed courtyard.

3.4.10 Materials

The Heritage District is known and admired for its architectural quality set in a park-like setting. The red brick walls, sandstone trim, gabled and hipped roofs and painted wood accents provide an appealing sense of permanence.

Outside the Heritage District, brick has been well employed as the dominant building material, often accented by grey stone trim. Modern materials have been added successfully to this palette including metal panel, curtain wall and synthetic stone.

- **Materials used on campus should be selected to complement existing materials.**
- **Materials and colours should generally convey a sense of permanence and dignity. Life cycle costs should be optimized through the use of durable, low maintenance materials and finishes.**
- **Windows: wood and aluminium are preferred. Vinyl window systems should be avoided. Clear glazing with low-E coating should be utilized. Tinted or mirrored glass should be avoided.**



Boston Ivy that covers the brick façade of the Kelley Memorial Building changes colour throughout the year and adds seasonality to the architecture.

- **The selection of materials should be in accordance with the Campus Building Materials Palette (see section 3.4.10).**
- **The University is a long term Owner/Operator of the building infrastructure on the campus. The life expectancy of any new building or renovation should reflect this commitment:**
 1. **100 years for the structure and inaccessible components**
 2. **50 years for the building envelope, except roofing.**
 3. **25 years for shingle or membrane roofing material (metal roofing material should provide a 100 year life expectancy)**
 4. **25 years for interior components**
 5. **30 years for mechanical systems (without major upgrades or replacement)**
 6. **30 years for electrical systems**
- **Design features should assist access to systems for ease of maintenance and repair.**
- **Building materials selected in accordance with the Campus Buildings Materials Palette should comply with the National Building Code and other legal restrictions.**
- **“Green” materials that are accepted under LEED® standards should be chosen. Materials that use toxic chemicals during fabrication and/or disposal, such as vinyl, should be avoided.**
- **Additional materials can be introduced, but should be reviewed to ensure compliance with the intent of the guidelines.**



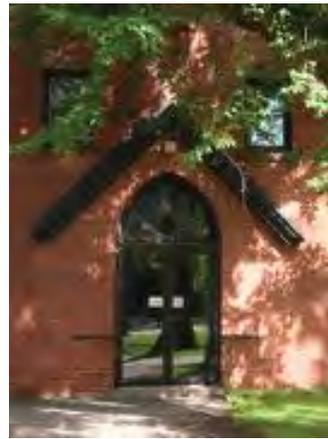
Exterior materials reinforce volumetric changes.



Copper cladding on this new building will patinate over time, providing a durable and attractive finish.

3.4.11 Campus Palette

The existing palette shown on the following pages illustrates the variety of windows, entrances and materials that exists on the UPEI campus.



3.4.12 The Campus Buildings Materials Palette

This chart provides a guide to the selection of appropriate materials for new campus buildings.

		Heritage District	Core Campus	South Campus	North Campus
Cladding	Brick	●	●	●	●
	Stone	●	●	●	●
	Synthetic Stone	●	●	●	●
	Concrete	● 1	●	●	●
	Pre-Cast Concrete	● 2	●	●	●
	Metal Panel Curtain Wall	● 3	●	●	●
	Copper	●	●	●	●
	Wood	● 4	● 5	● 5	●
	Stucco	●	●	●	●
	Vinyl Siding	●	●	●	● 6
	Metal Siding	●	●	●	● 6
	Windows	Wood	●	●	●
Aluminium		●	●	●	●
Vinyl		●	●	●	●
Roofing	Slate	●	●	●	●
	Copper	●	●	●	●
	Zinc	●	●	●	●
	Standing Seam Metal Panel	● 7	●	●	●
	Wood Shingle	●	●	●	●
	Asphalt Shingle	●	●	●	●
	Built-Up Asphalt	● 8	●	●	●
	Flat Roof Membrane	● 8	●	●	●

Legend

- Preferred Material
- Acceptable
- Not Permitted
- # Notes describing condition of use

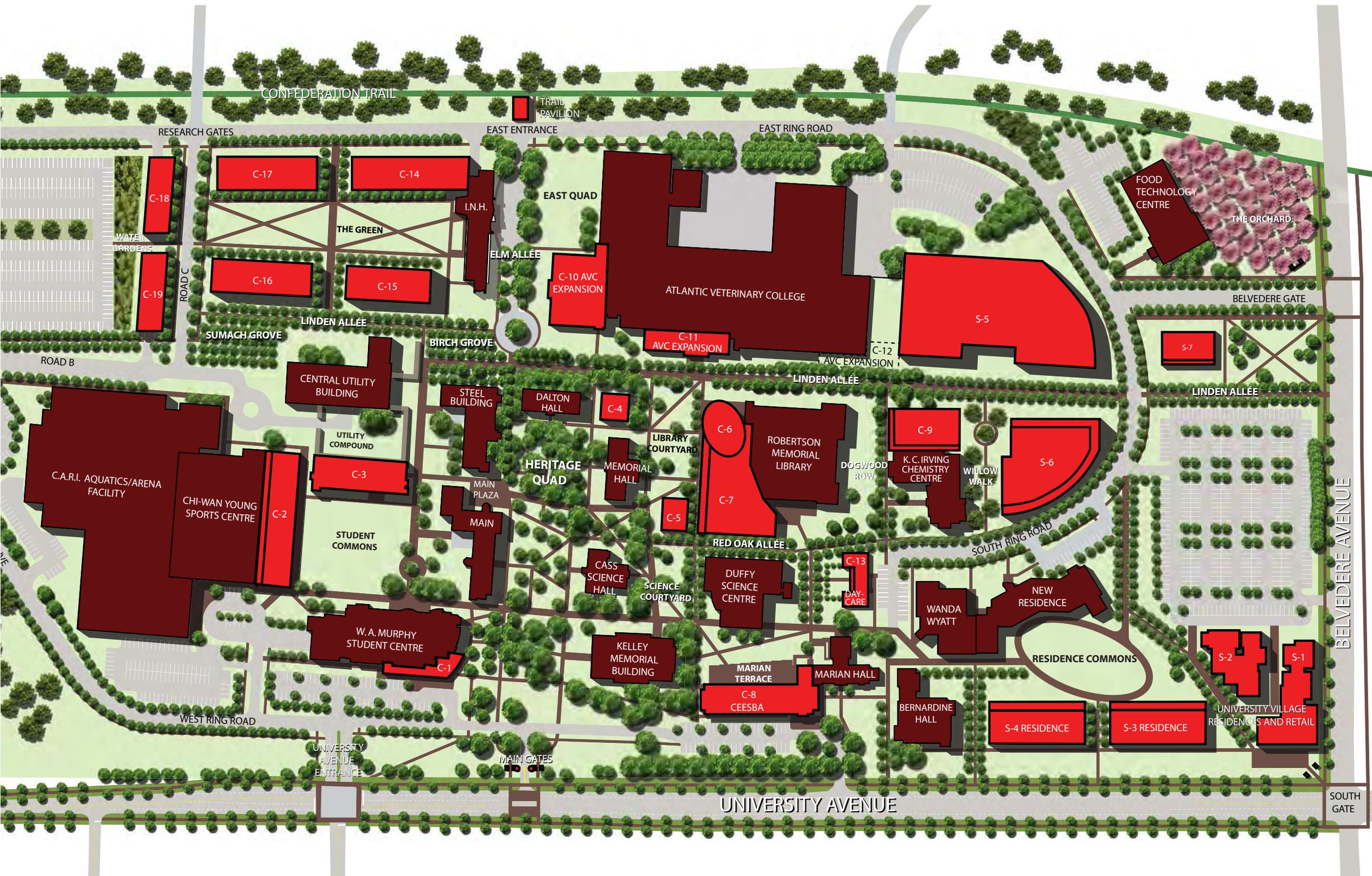
Notes:

- 1 As a visible cladding element, may be used in small quantities, i.e. foundations, lintels, sills, columns.
- 2 As a visible cladding element, may be used in small quantities, i.e. lintels, sills, pediments.
- 3 Natural metal colours are preferable.
- 4 Wood cladding is suitable for small, feature buildings (such as C-4) in the Heritage District. Wood is a suitable material for elements such as breezeways, colonnades, canopies, and as part of the exterior building composition.
- 5 Wood cladding for small buildings, residences or as elements of a larger building composition in the South Campus.
- 6 Vinyl and metal siding in the North Campus area is acceptable, provided that siding does not form the principal façade of a building that faces onto primary public areas or roadways.
- 7 Natural metal colours are preferable.
- 8 The use of light-reflective surfaces and green roof systems in association with flat roofs is encouraged.

4 Open Space











4.1 Introduction

Landscape features provide the most memorable visual image of the campus. The landscape in particular makes a powerful first, and lasting impression and can be important in establishing a powerful image of quality which ultimately will assist the University in recruitment and retention of faculty, students and staff.

The Campus Plan defines landscape to include all the major elements of outdoor space – circulation routes (roads and pedestrian walkways), parking lots, outdoor gathering areas (plazas, courtyards, open space), site furnishings (seating, trash receptacles, lighting), walls and plants (trees, shrubs, groundcover, grasses, annual and perennial flowers).

The Open Space Plan identifies ways to manage and protect existing campus landscape assets and direct future landscape design that is environmentally suitable and compatible given natural and financial resource constraints, and that addresses campus planning and design objectives.

4.2 Design Principles

- Expand the network of quads and courtyards as the principal structuring framework of the campus.
- Define campus edges.
- Facilitate social interaction within the campus.
- Minimize the impact of vehicles in the campus core.
- Enhance campus safety.
- Enhance the campus image with planting design.
- Create a visitor friendly campus.
- Create an environmentally sustainable campus.



4.3 Entries and Edges

Entries to campus are locations that offer opportunities to signal arrival at the University of Prince Edward Island and to establish a strong sense of place. The edges of campus should define the boundary between the University, downtown Charlottetown and surrounding areas as an inviting, yet dignified “face to the community”. A hierarchical system of entry definitions should be established to assist wayfinding.

4.3.1 Primary Entries

Major entries are the most significant, highly visible entrances to the campus. These points of entry serve students, staff and faculty and provide pedestrian and vehicular circulation routes. These are also the entrances most likely to serve visitors and off-campus commuters.

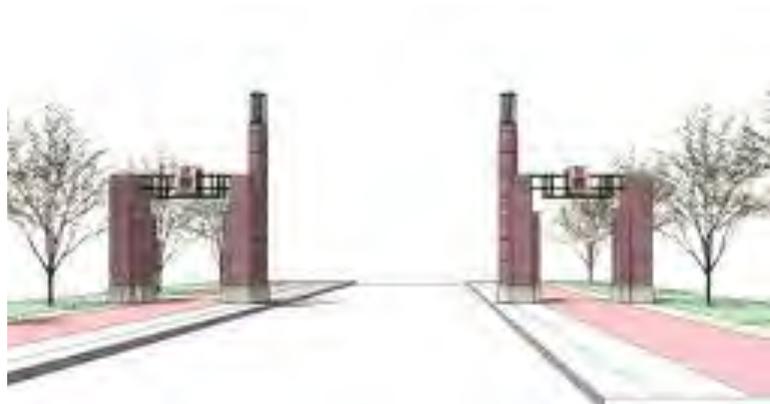


4.3.2 Secondary Entries

Secondary entry points to campus serve both pedestrian and vehicular circulation. Secondary entries have less visual or wayfinding importance and are less trafficked than primary entries. These entries are mostly used by pedestrians and local vehicular commuters.

In order to create an appropriate level of visibility for Major Entries that are predominantly vehicular, and to provide an adaptable, consistent theme in a variety of locations and settings, entry identity elements are proposed.

For predominantly vehicular entries, gateway structures have been proposed. The gate structure should be of a sufficient height to provide instant recognition from within a vehicle as an indication of arrival at a major entry way and should include the University crest and signage.



A 3-D model shows a potential design for gates to mark the Main Gates reinstated at the base of the Heritage Quad.



The Belvedere Avenue entrance lacks pedestrian amenities like sidewalks, street trees and pedestrian lighting that contribute to a pedestrian scale.



The pedestrian entrance from University Avenue does not provide a clear, intuitive route into the campus.



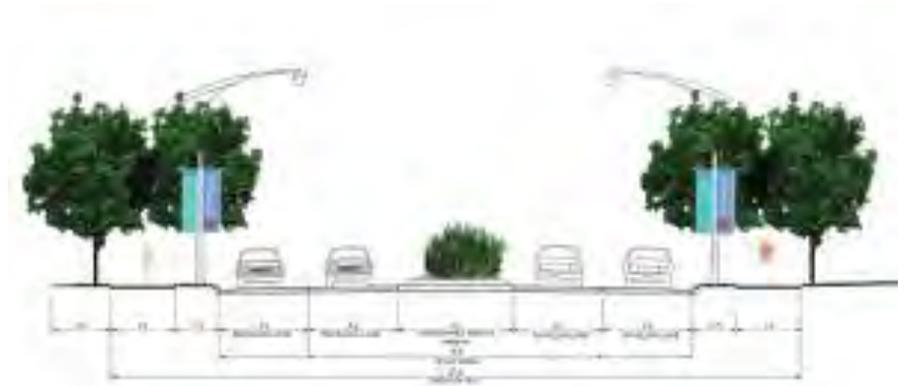
A view from the west end of the Heritage Quad onto University Avenue shows the location of the former main entrance to UPEI.

4.3.3 University Avenue

Once named Elm Avenue for the trees that lined its sidewalks, University Avenue today has aesthetic as well as safety issues that prevent it from being a great street and gateway to both the University and to Charlottetown's downtown. Aggressive vehicular traffic along UPEI's western perimeter creates an unsafe crossing for the many students who live in the adjacent housing community. Working with existing curb to curb measurements, the proposed design for this street incorporates street amenities that will be attractive while creating safer pedestrian conditions.

- Sidewalks line both sides of University Avenue but are separated from the roadway by a tree-lined boulevard.
- Double rows of street trees flank the sidewalks to create an integrated pedestrian canopy.

- A median planted with native and thorny shrub roses directs students to cross at signalized crossings. Although the design may not be able to completely prevent students from jay-walking, the median provides an area of refuge while crossing four lanes of traffic which makes it safer.
- A pedestrian activated signalized intersection allows students to cross at the foot of the main gates.



University Avenue is an important pedestrian route for students and should be designed to feel pleasant and safe.



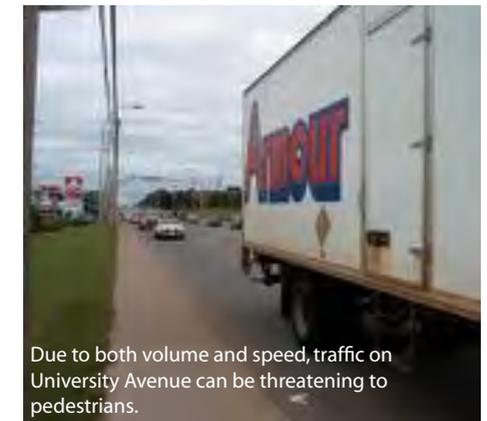
The northwest corner of the campus provides an informal entrance to the campus through the naturalized north campus.



Lengths of University Avenue lack boulevards that buffer pedestrians from vehicular traffic.



The corner of University Avenue and Belvedere Avenue lacks a sidewalk and creates an unsafe environment for pedestrians.



Due to both volume and speed, traffic on University Avenue can be threatening to pedestrians.

4.3.4 Belvedere Avenue

The street tree planting designed for University Avenue is extended to wrap around onto Belvedere Avenue to mark the corner as the beginning of the University district and to provide pedestrian amenities that make Belvedere Avenue safe and pleasant. As the connection between University Avenue and Belvedere Gate, and then further to Confederation Trail, Belvedere Avenue should be constructed to carry pedestrians and motorists without conflict. A signalized intersection is proposed for Belvedere Gate to align with the entrance to the Farmers' Market (see Section 2 for further discussion on options).



The south side of Belvedere Avenue lacks a sidewalk although paths show that it is used by pedestrians.



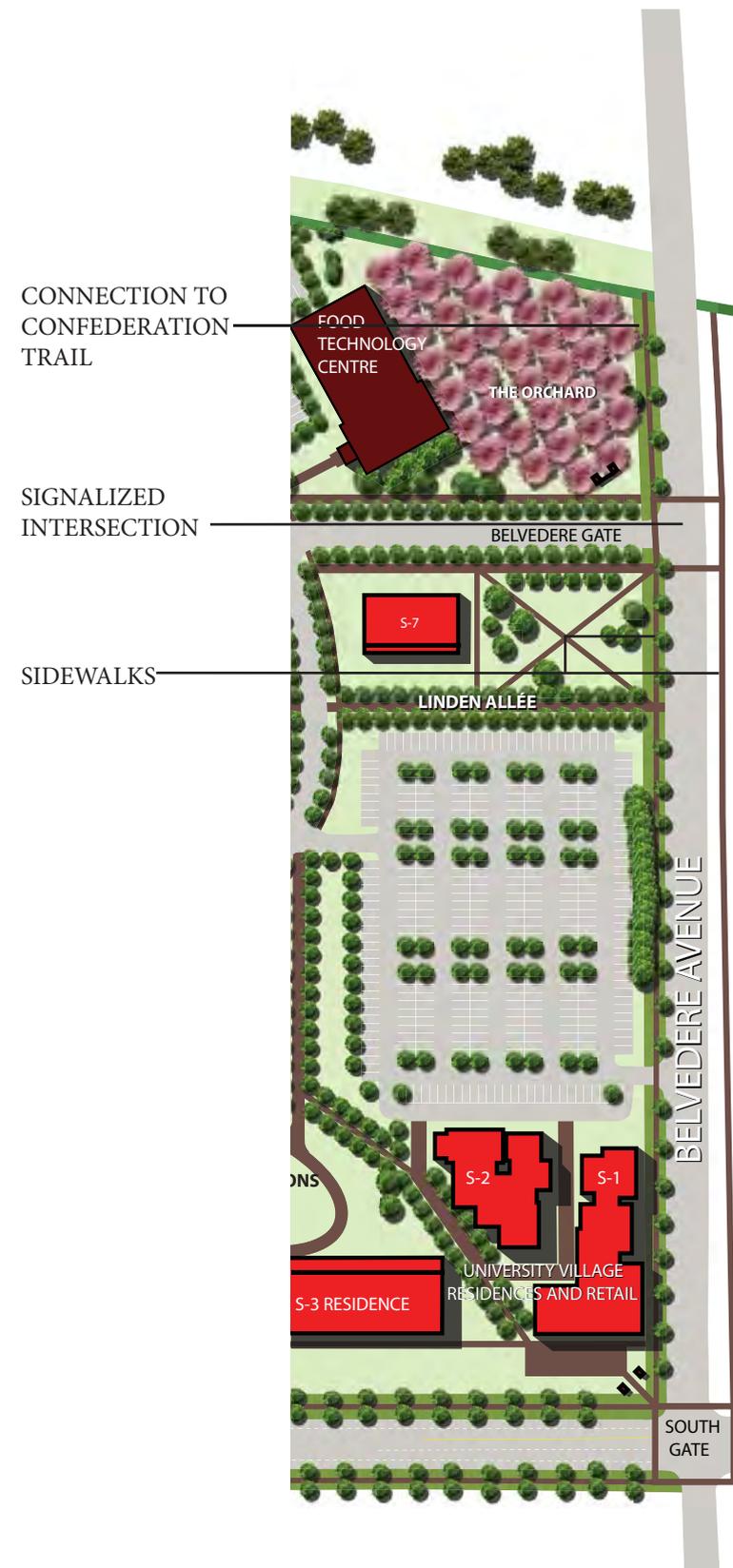
The Belvedere entrance to campus by the Food Technology Centre should be upgraded with signals, directional signage, pedestrian-scaled lighting and planted boulevards.



Belvedere Gate and the entrance to the Farmers' Market should share a proposed signalized intersection.



A view from the southeast corner of University Avenue and Belvedere Avenue shows a late summer hayfield at the Experimental Farm.



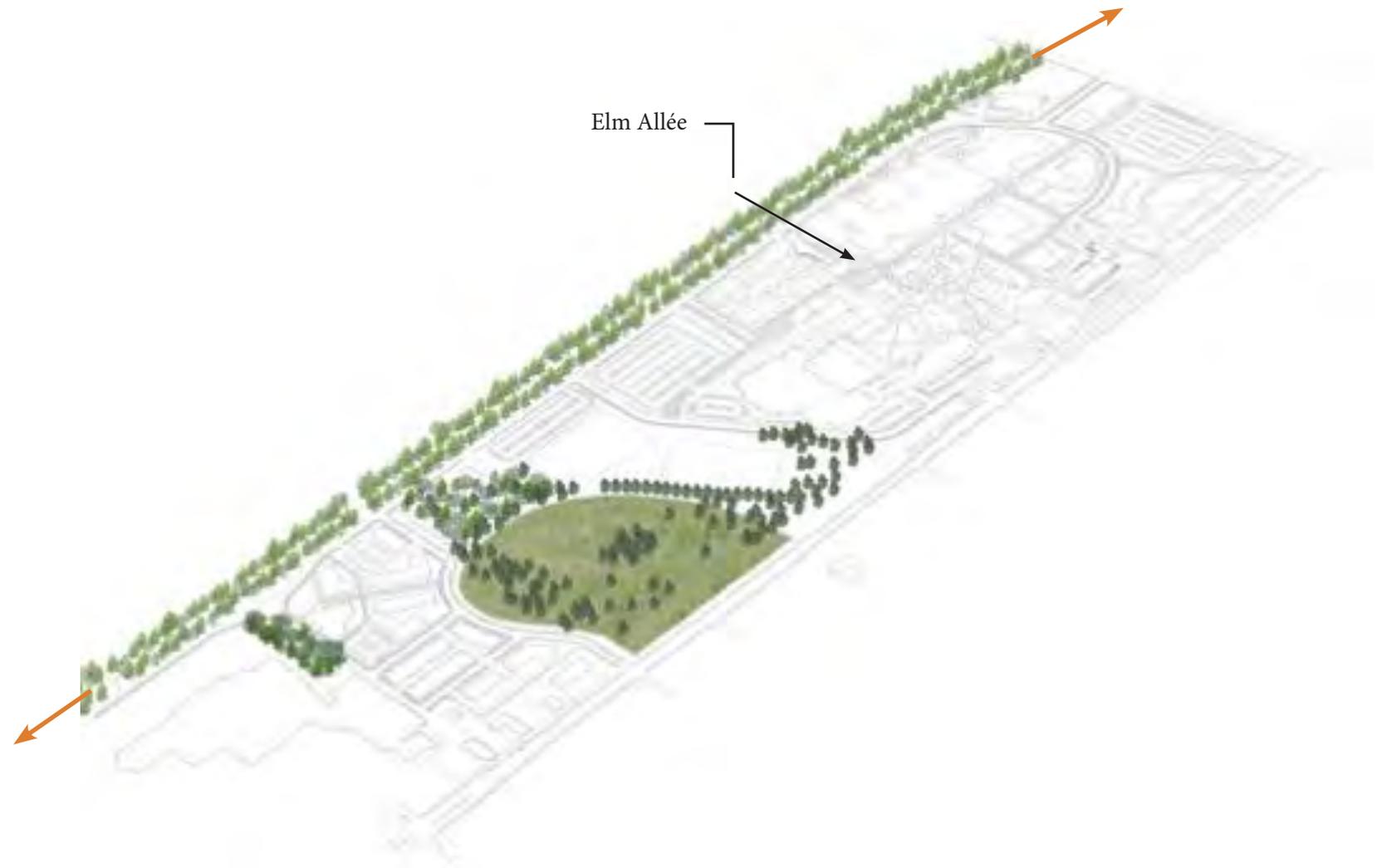
4.3.5 Confederation Trail

Confederation Trail is a cycling/pedestrian trail created from a converted rail line that runs the entire length of the Island dipping down to Charlottetown. Naturalized with stands of birch, poplar, spruce and tamarack, the trail forms the eastern edge of the campus and connects the University with downtown Charlottetown. Historically, trains stopped beside the campus and provided transit for students from across the Island. Today, the trail is used by cyclists, joggers, hikers and dog walkers.

Access to the trail should be improved to promote it as a direct, non-motorized route from the University to downtown, a route to the Charlottetown Mall or as a recreation corridor. Culverts that run parallel to the trail on either side collect water and foster naturalized vegetation buffers, but these culverts should be bridged at key locations to facilitate pedestrian access. Bicycle racks, shade pavilions and campus signage should be located at key points of entry into the University from the trail. The Campus Plan identifies a pavilion (C-19) at the primary entrance to the campus from the trail that is aligned with the Elm Allée.



The orange line indicates the extent of Confederation Trail across the entire Island.



Recessed channels on both sides of the trail support rows of naturalized vegetation.



Connection to the trail from the campus should be improved with constructed, barrier-free access.



Interpretive signs that explain the history of the trail should be relocated to the Trail Pavilion (C-19).



The entrance to the trail from Belvedere Avenue is bordered by verdant fields to the east.

4.4 Open Space and Corridors

In order to strengthen the heritage quality of the campus layout, certain corridors or axes and formal open spaces should be preserved, reinforced or created. The structure created by open spaces, buildings, and connecting corridors will provide the basis for landscape, lighting, pathway and street treatments. Landscape treatments of this structure will reinforce and enhance the visual qualities of the campus.

Additionally, areas of the campus which are not clearly associated with or connected to the Core Campus area will be better linked to this area both visually and functionally.

- Enhance and expand upon the Campus's open spaces and linear corridors.
- Provide a greater sense of organization and clarity.
- Improve wayfinding.

Spatial organization

The spatial organization of the campus landscape is primarily determined by two major components: buildings and large deciduous trees. Paths and roads also contribute an important organizing function, but their role is subordinate to the dimensional strength of buildings and trees. The limits, emphasis and character of spaces within and around the campus are defined by these elements.

The primary visual strength of the University of Prince Edward Island campus is the continuity of architectural style around the Heritage Quad, and the Heritage Quad itself.

The existing formal open spaces of the campus should rely on the use of large shade trees, organized axes, a sweeping ground plane, simple furnishings and paving to establish or preserve their character. These highly-ordered axes and open spaces are defined by geometrically composed building forms and tree-lined planting. These spatial edges should be flexible to allow for an unlimited number of uses by individuals and large assemblies.

The park-like settings should be protected and preserved. Every effort should be made to encourage and preserve diversity of use in both types of these visually important spaces. These spaces can be perceived both as unique places and as unifying elements, joining the campus into a contiguous unit.

Between open spaces are connecting spaces that should be emphasized through landscape design and building massing to better link, both visually and functionally, various parts of the campus.

Because plazas, courtyards and terraces are the places where people are most likely to congregate, these places can provide opportunities for more highly-detailed, civic design solutions. Walls, steps, lighting, seating and paving are the dominant elements within these spaces and their expression should be sympathetic to the existing Georgian architecture in materials, form and composition.

The composition of elements should adhere to the principles of design for defensible space: clear visibility should be maintained at the ground plane, site lines into the space from adjacent buildings and areas should be preserved, and traffic patterns should avoid dead or isolated zones.



The lawn in front of the Kelley Memorial Building is an informal route to neighbouring faculty parking.



Mown paths through the naturalized meadows in the north campus shape pedestrian activity and minimize pedestrian impact on environmentally sensitive areas.

4.4.1 Quadrangles

A campus quadrangle is traditionally a central organizing space of the campus; it should represent and signify the heart of the university. Although quads should be comfortable and inviting, they should also be recognized as the formal grounds of the university. The selection of tree, shrub and groundcover species and the way in which they are planted has the ability to convey a stately significance to correspond to the role of the space. The plant material should conform to a formal plan that accentuates and enhances pedestrian routes and seating areas, frames and marks building entrances and emphasizes views through the quad to the landscape beyond.

Trees should be chosen for their form and colour through all seasons; traditionally, campus quads are planted with perimeter deciduous trees whose form, even in winter months, works to echo the closed geometry of the space. Campuses often choose trees that have significance to the school or that grow to have significance to the school: University of Toronto plants English Oaks because it is the school tree and is featured on the university crest; the University of Washington plants Black Cherry trees because of the significance of the cherry tree in its history.

HERITAGE QUAD



The great asset of the Heritage Quad is its mature trees that produce a light dappled space that connects surrounding buildings.

Heritage Quad

Located at the original site of the Charlottetown campus, the main quad remains an important place for both the University and the greater Charlottetown community. It is both the physical and iconic centre of UPEI. Along with replacing the entrance gate that was once aligned with the foot of the Heritage Quad, other steps can be taken to reinforce the primacy of this historic landscape space.

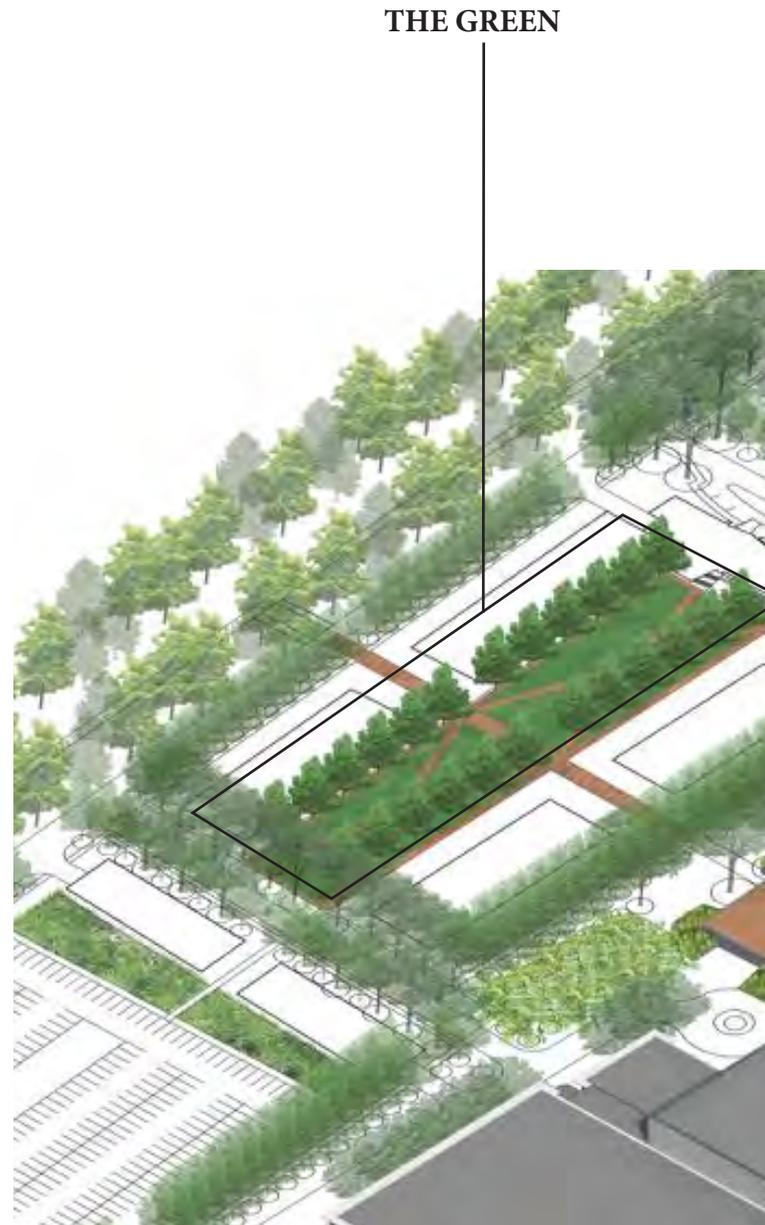
The outdoor space is defined by the surrounding university buildings and by the mature canopy of trees that contribute to its parklike setting.

- The quad should feel comfortable and inviting throughout the year.
- Lighting should be sited around the perimeter of the lawn.
- Pedestrian paths should be rationalized and narrowed to maximize the amount of lawn in the quad.
- Asphalt paths should be replaced by pedestrian paving that matches the character and materials of surrounding architecture; brick or unit pavers would be an appropriate choice.

The Green

The open space in the centre of this area along the east side of the campus, north of the new INH facility, has served as a parking lot for many years. With the development of new buildings and expansion of various programs, the space becomes more important as a gathering place for people. Access to and from the site remain critical.

- A proposed roadway connects The Green to East Ring Road.
- Pedestrian sidewalks parallel the roadway and are directed to building entrances.
- A series of lawns are connected by brick pathways.
- The space is defined by rows of deciduous trees that echo and reinforce the surrounding architecture.
- Benches are located under the trees around the perimeter of the site.
- A clear pedestrian connection to buildings at the north end of the site is provided.
- A clear pedestrian link to the parking lot beyond the northern end of the quad is provided.
- Brick pathways that cross the lawns link building entrances.



Simple rows of trees planted in a wide expanse of lawn and bisected with pedestrian paths forms an elegant space and an archetypal campus quadrangle.

RESIDENCE COMMONS



Residence Commons

A concave expanse of lawn is further defined by a wide, elliptical pedestrian path that encircles its brim. The gentle form of the land has been designed without tree planting to maintain the space as an open ground plane, forming a centre around which residence buildings are placed. A pleasing expanse to look onto, the Residence Commons is also a stage for informal sports and socializing.



UPEI students adapt the courtyard behind the W. A. Murphy Student Centre to accommodate beach volleyball in early September 2004.

Student Commons

Bordered by the glazed hallway of the W.A.Murphy Student Centre and the proposed classroom buildings, the Student Commons is an open, lawned courtyard that can accommodate changing programmatic needs: an outdoor patio, a beach volleyball court and student rallies. The courtyard is an adaptable stage whose program is defined by a changing student body.

STUDENT COMMONS



4.4.2 Courtyards

Marian Terrace

The space east of the proposed Marian Hall expansion is defined as a paved terrace that, through a glazed wall, extends the building's floorplate. Flanked with seating, the terrace creates a social space that serves surrounding campus buildings as well as the many outreach programs to be located in the Centre for Enterprise and Entrepreneurship.

MARIAN TERRACE

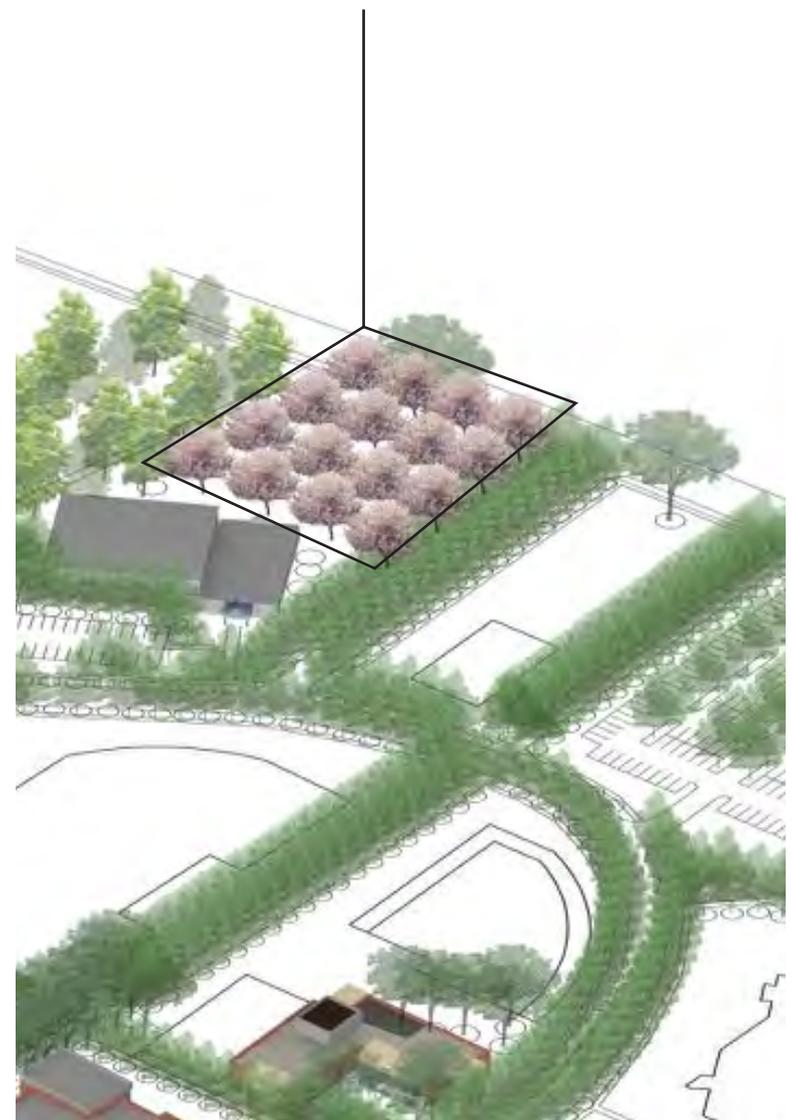


An apple orchard proposed for the courtyard of the Food Technology Centre is both a strong symbol of the building's program and a beautiful landscape throughout the year.

The Orchard

A grid of apple trees forms the courtyard of the Food Technology Centre. Visible from both Confederation Trail and Belvedere Gate, the orchard symbolically marks the program of the Food Technology Centre while creating a powerful heritage landscape to be enjoyed by the campus community. Throughout the year, from the first blossoms, to the ripening of the fruit, to the bare sculptural form of the trees in winter, the orchard is a potent and recognizable landscape archetype linked to the Island's agricultural heritage.

THE ORCHARD



EAST QUAD



East Quad

An exercise yard that serves the Atlantic Veterinary College also acts as a public face for the veterinary school and UPEI as a whole. Sited across from the INH research building, and adjacent to the Elm Allée, the East Quad is an open, lawned space for dogs and their caretakers.



Toddlers attending Campus Kids Daycare use the Heritage Quad for active play.

CHILDREN'S GARDEN



Children's Garden

A new outdoor play space for children attending Campus Kids Daycare is conceived as a verdant and changing garden that will provide space to play and space to interact with the natural environment. Recent research on children's outdoor spaces values places that are green and thriving because they are dynamic; they change with the weather and with the seasons, and allow kids to play creatively and differently every day.



4.4.3 Corridors

Linden Allée

The Linden Allée currently forms a strong landscape image on the campus; the parallel rows of evenly spaced trees create a natural colonnade that currently extends across the front of the AVC Building. The trees provide a dramatic form throughout the year: the golden leaves in the fall, the bare, snow-capped structure through the winter and the sweet smell of Linden flowers that marks the end of the academic year. To protect and reinforce this important landscape element, it has been extended and interplanted. The allée is designed to be the guiding element into the University from Belvedere Gate and continues north to the southern edge of the sports fields in the north campus.



Two views of the Linden Allée show it as a powerful and elegant landscape form both in winter and summer.

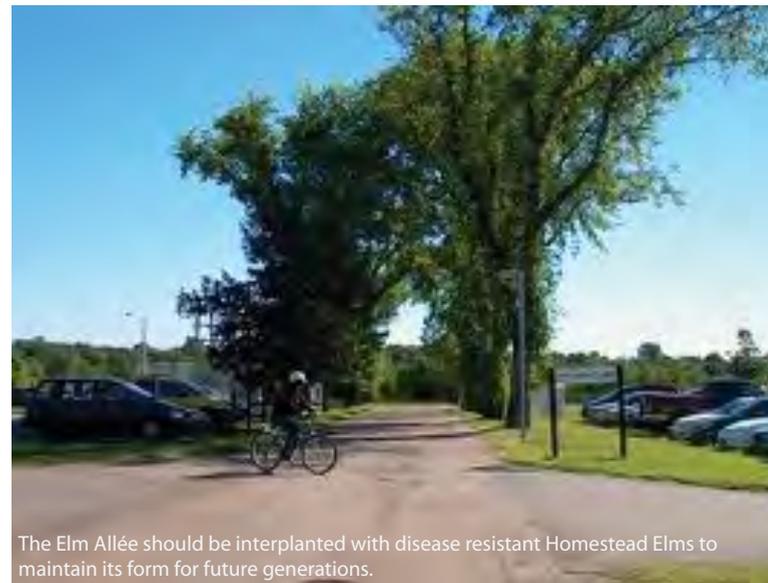
ELM ALLÉE



Elm Allée

The existing allée of elm trees provides a historic and powerful east gateway to the Campus. This allée should be preserved and improved.

Although the surviving elms have not succumbed to Dutch Elm Disease, their form has been compromised by natural environmental stress and by their age. Interplanting of hybrid elm species that have proven to be resistant to Dutch Elm Disease will secure the form of this landscape element for future generations.



The Elm Allée should be interplanted with disease resistant Homestead Elms to maintain its form for future generations.



A spring view of the Elm Allée shows the characteristic vase shape of the American Elm; interplanting from the same family will ensure that this shape is maintained.

4.4.5 Plazas and Terraces

Plazas and terraces should be created at the entrances of buildings to serve as casual gathering places. They should be distinguished by paving materials, lighting, seating and barrier-free design.

MARIAN COURTYARD



Marian Courtyard

The south side of the proposed CEESBA Building is a verdant courtyard that gains its organizing structure from existing mature trees. As a seasonally evolving green space, the courtyard links the existing Marian Hall with the new addition which is currently in the design process. The courtyard optimizes the site’s microclimate, shelter from predominant northern winds and the capture of south-western sunshine, to extend its seasonal use and to animate the outdoor space into the shoulder seasons.

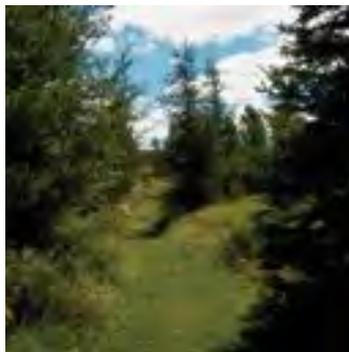
Main Plaza

Most universities have a central plaza or primary gathering place. Like traditional villages or small towns that have town squares, campus communities need common places for relaxation and social interaction. Main plaza, off of the Heritage Quad, functions as a hub that connects facilities and acts both as a village street and as a place to hang out. Defined by Main Building on the west and Steel Building on the east, the space inherits the character of these two historic brick buildings.

Brick paving should define the ground plane and perimeter seating should be used to reinforce the shape of the space.

MAIN PLAZA





Several views show the seasonality of the pond and the emergence of pioneer species in the grasslands.

4.4.6 Naturalized Areas

The Pond

The naturalized land in the north end of the campus is a passive open space, a space that is not used for pedestrian circulation or active recreation purposes yet an important campus asset that can serve informal activities and provide a setting for general relaxation. The seasonal pond can provide a major aesthetic site feature as well as natural stormwater retention. Outside of the five minute walking radius from the centre of campus, this environmentally sensitive area is characterized by meadows, a seasonal pond and water-loving pioneer trees like poplars and willows. Paths are mown into the tall grasses and provide an informal entrance to the University from the northwest corner of the campus property. Paths wind through verdant meadows, across a sinking wooden bridge to the crest of the sports fields.

Eventually, if left alone, the fertile meadow land will advance into forest succession. The pioneer species of poplars and willows are the first species to populate a grassland; they are short-lived species that prepare the ground for longer-lived hardwood species. The meadow should be mowed yearly to maintain its open character and ensure a diversity of low growing species.

The Pond should be preserved and new wooded areas should be planned as a natural buffer on the northern perimeter of the campus to define the edge and mitigate the view to the back of the Charlottetown Mall. The stewardship of the land then becomes the design; construction debris and other refuse should be removed from the area.

THE FOREST

THE POND



4.4.7 Sports Fields

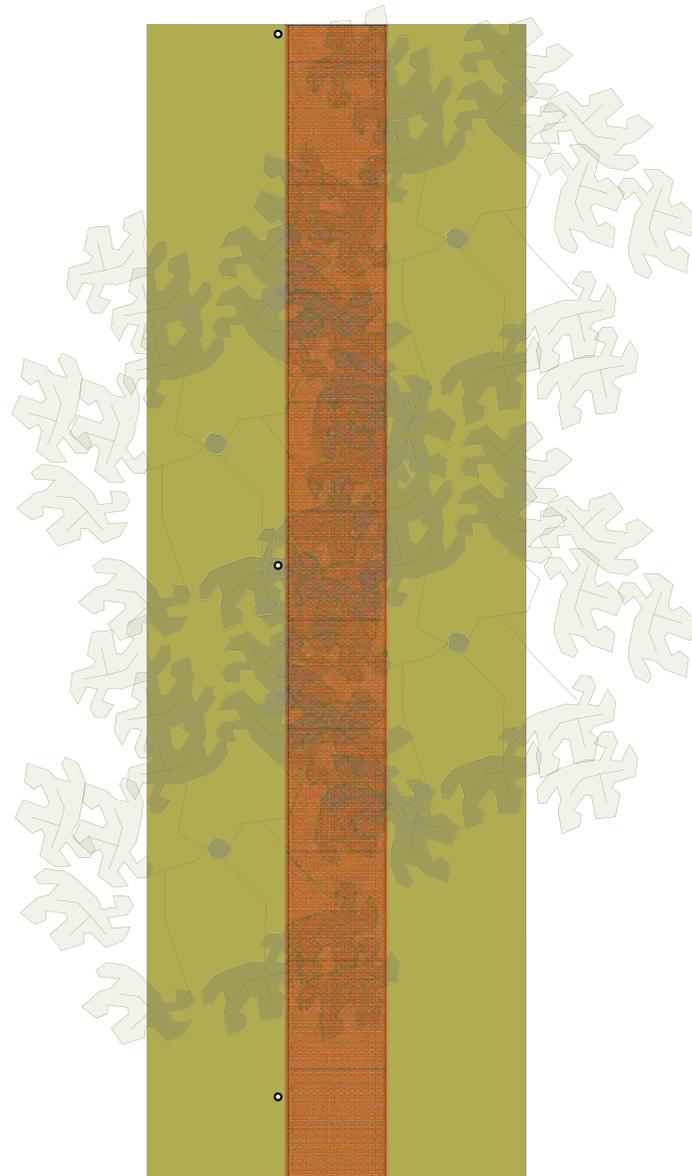
Sports fields should be attractive open space elements for athletes, spectators and pedestrians who walk past or look onto them. The fields are oriented to minimize sun glare for athletes. Bordering rows of trees will be planted like hedgerows to break and deflect strong, prevailing winds from the north.



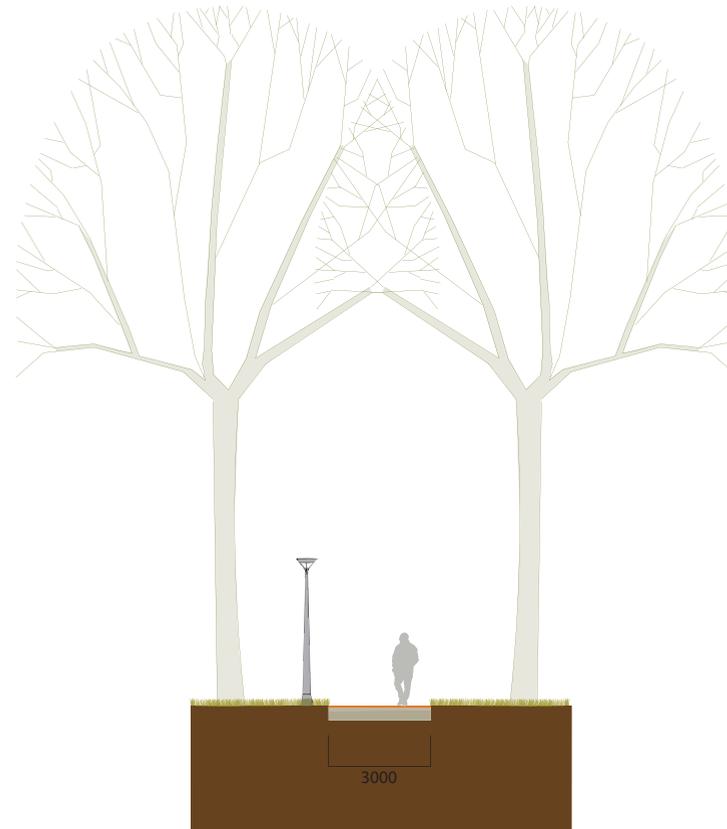
Bleachers should be designed for the comfort of spectators and to be used even when games are not being played.



Paths



PATH TYPE 1 : PEDESTRIAN PATH



PATH TYPE 1 : PEDESTRIAN PATH

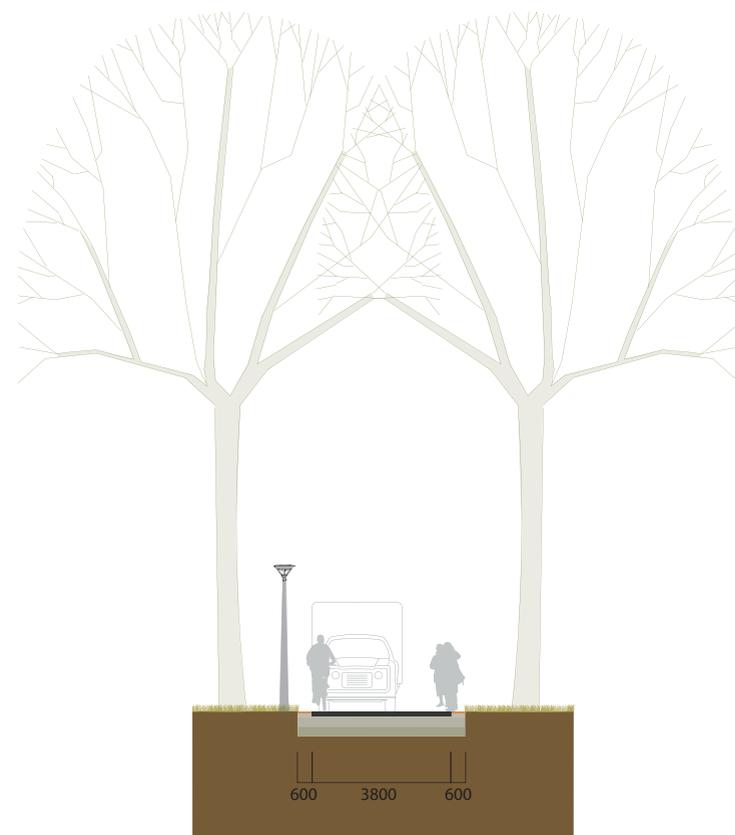
- 3000mm BRICK PATH/UNIT PAVER
- PLANTED BOULEVARD
- SAND SETTING BED
- 150mm COMPACTED GRANULAR 'A'
- EXISTING SUB-BASE
- PEDESTRIAN LIGHT STANDARD AT 15 METERS ON CENTRE

P1

4.5 Circulation

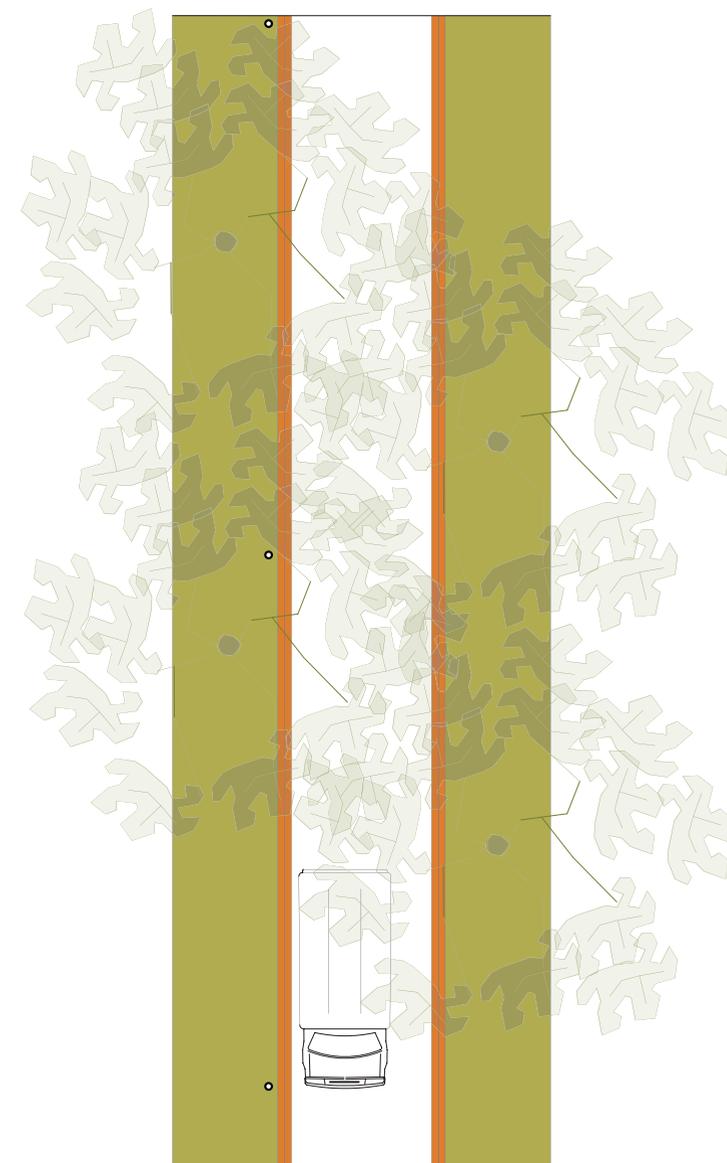
By helping to define and differentiate circulation routes, the landscape can improve wayfinding and give identity and scale to the campus. Currently, there is little difference between pedestrian, service vehicle and vehicular traffic routes at UPEI; although there are some concrete sidewalks, most pedestrian paths through the campus are asphalt and wide enough to accommodate vehicles. Although they provide access by intermittent service and emergency vehicles, these pathways become open to the general driving population; cars often drive through pedestrian paths even in the main quad. As well as detracting from the pedestrian character of the campus, the degradation of adjoining landscapes that results from vehicular traffic is apparent. The rationalization of these path systems will enable pedestrians, bicycles and service vehicles to move more smoothly on specifically designated paths. The circulation system will be better defined and will become more attractive with supporting tree planting and lighting.

P2



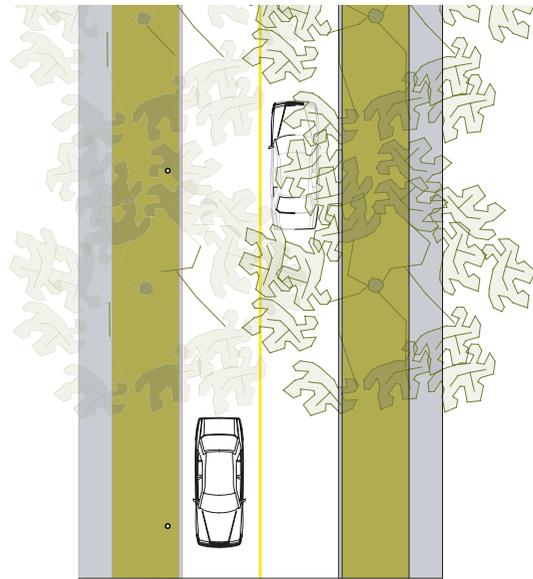
PATH TYPE 2 : SHADED PATHWAY- PEDESTRIAN/BICYCLE/SERVICE VEHICLES

- 600mm BRICK EDGE/UNIT PAVER
- 3800mm ASPHALT ROADBED
- 3m PLANTED BOULEVARD
- SAND SETTING BED
- 150mm GRANULAR 'A'
- 150mm GRANULAR 'B'
- EXISTING SUB-BASE
- PEDESTRIAN LIGHT STANDARD AT 15 METERS ON CENTRE

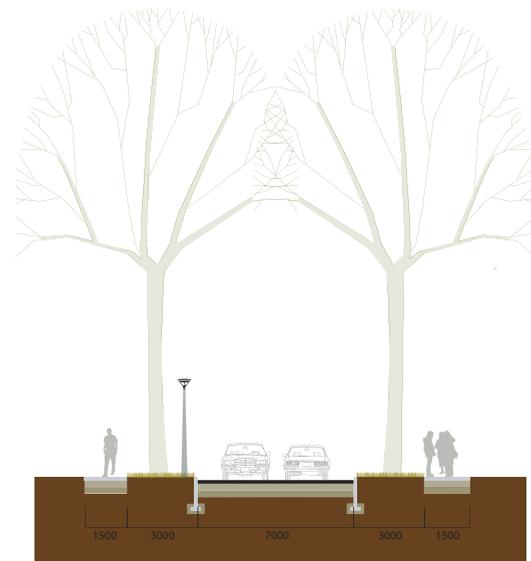


PATH TYPE 2 : PEDESTRIAN/BICYCLE/SERVICE VEHICLES

Roads



ROAD TYPE 1 : TWO-WAY ROAD



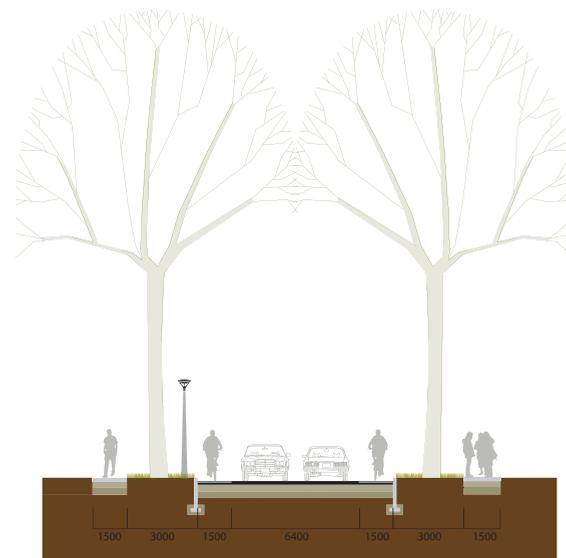
ROAD TYPE 1 : TWO-WAY ROAD

- CONCRETE CURB AND FOOTING
- 7000mm ASPHALT ROADBED
- 3m PLANTED BOULEVARD
- 1500mm CONCRETE SIDEWALK
- 150mm GRANULAR 'A'
- 150mm GRANULAR 'B'
- EXISTING SUB-BASE
- PEDESTRIAN LIGHT STANDARD AT 15 METERS ON

R1



ROAD TYPE 2 : TWO-WAY ROAD WITH BIKE LANES

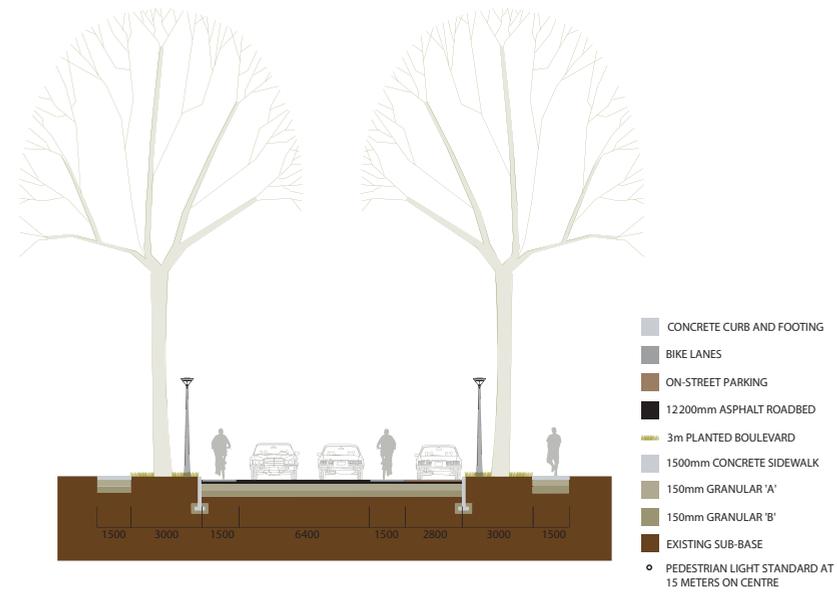


ROAD TYPE 2 : TWO-WAY ROAD WITH BIKE LANES

- CONCRETE CURB AND FOOTING
- BIKE LANES
- 9400mm ASPHALT ROADBED WITH BIKE LANES
- 3m PLANTED BOULEVARD
- 1500mm CONCRETE SIDEWALK
- 150mm GRANULAR 'A'
- 150mm GRANULAR 'B'
- EXISTING SUB-BASE
- PEDESTRIAN LIGHT STANDARD AT 15 METERS ON CENTRE

R2

R3

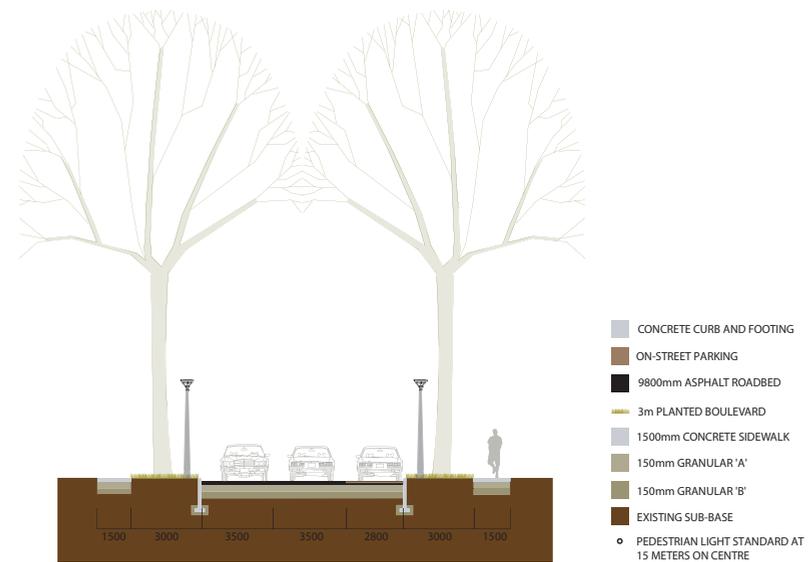


ROAD TYPE 3 : TWO-WAY ROAD WITH BIKE LANES AND ON-STREET PARKING



ROAD TYPE 3 : TWO-WAY ROAD WITH BIKE LANES AND ON-STREET PARKING

R4



ROAD TYPE 4 : TWO-WAY ROAD WITH ON-STREET PARKING



ROAD TYPE 4 : TWO-WAY ROAD WITH ON-STREET PARKING

4.5.1 Pedestrian

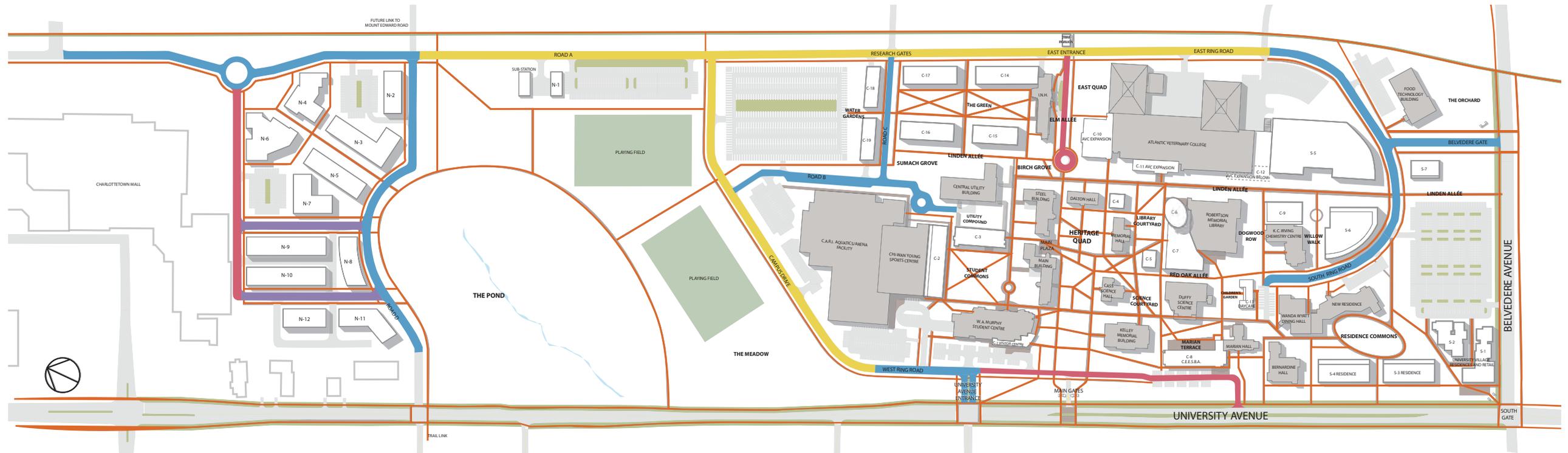
The emphasis in campus planning efforts should be the creation and preservation of a high-calibre pedestrian and bicycle environment. The circulation system, as an organizing factor, will lend meaning, order and clarity to the campus.

The design objective for streets and pathways is to make them clearly recognizable as continuous spatial corridors so that the driver, cyclist or pedestrian will be able to automatically comprehend connections between campus destinations within the campus and out to the surrounding community. These linear links have been prioritized according to their location, projected function, capacity and their importance in the overall design. Lighting, plant material and site furnishings will further define spatial corridors and give them a visual hierarchy.

A typical street design would include regularly spaced overstorey trees, lighting and connected sidewalks lining both sides of the street. Generally, all streets and pathways should be properly scaled, well-marked with appropriate signage, well-lighted and unambiguous as to appropriateness for pedestrian, bicycle or vehicular traffic.

Pathways on campus are of particular importance because of their space-linking function, but they should be appreciated as more than a means to get from one place to another. These walkways can be memorable places in and of themselves as they sequentially reveal the landscape to the pedestrian in motion and harmonize the linked spaces. This experience will vary with each type of pathway design. Pathways should be considered in the larger context as opportunities to enrich the campus and should therefore be designed on a campus-wide basis, not on a project by project basis.

- ROAD TYPE 1: TWO-WAY ROAD
- ROAD TYPE 2: TWO-WAY ROAD WITH BIKE LANES
- ROAD TYPE 3: TWO-WAY ROAD WITH BIKE LANES AND ON-STREET PARKING
- ROAD TYPE 4: TWO-WAY ROAD WITH ON-STREET PARKING





Asphalt pathways are uniformly too wide to feel pedestrian in scale.



Retro-fitted barrier-free ramps should be reconstructed to evoke a sense of permanence.



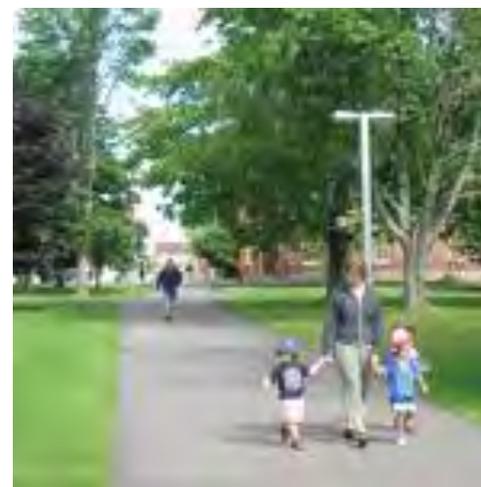
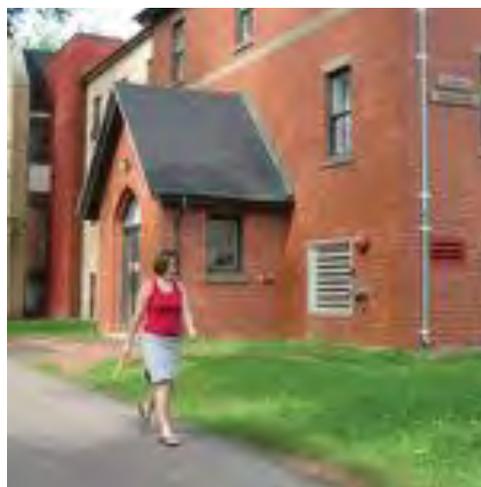
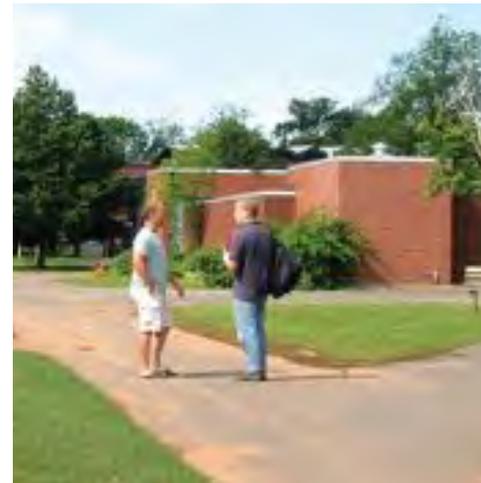
Vehicular traffic through the campus should be limited to service vehicles on designated routes.

Campus pathways should be consistent in material and detail. Concrete unit pavers or brick are recommended for walkways, building entrances and plazas.

The campus environment should aim to be completely barrier-free; barrier free guidelines should be a foremost consideration when siting pedestrian pathways, setting finished grades for parking lots, designing drainage systems and siting building entrances. Access ramps should be integrated into the pathway system and should not appear to be added on in hindsight.

Pedestrian/cyclist crosswalks should be clearly marked with textured paving and should include curb cuts to make them completely accessible to those in wheelchairs. Crosswalks should be sited for safety as well as design integrity.

All improvements will require the elimination of steps or provision of alternative accessible routes. Where possible, steps or ramps with railings should be replaced with sloped sidewalks: ramps that have slopes of less than 5%. Sloped sidewalks do not require railings.



Overall, the recommendations for pedestrian and bicycle circulation routes are:

- Pathway widths should be narrowed and rationalized to improve, define and separate pedestrian, vehicular and service vehicle traffic.
- A clear connection from the campus to Confederation Trail should be created.
- Improved connections to the north campus naturalized open space should be established to promote this area as a passive recreation district.
- Conflicts between vehicles and pedestrians, and vehicles and bicycles should be reduced.
- Bicycle parking areas should be improved in function and appearance
- Accessibility deficits should be improved upon or eliminated.

4.5.2 Vehicular Circulation

Site improvements, such as sidewalks, lighting, street trees and signs, should be an integral part of all campus roadway projects; they should be required as part of the design and construction of all new roads.

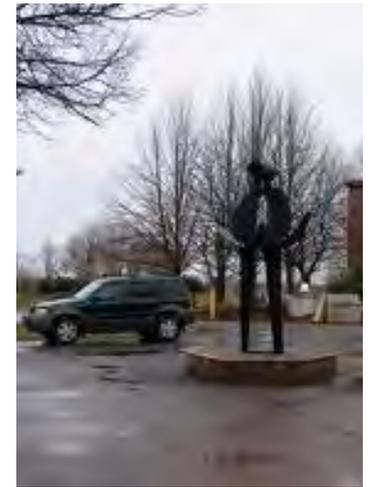
Vehicular circulation should be accommodated in a safe and efficient manner, but should be considered a subsidiary function to pedestrian and bicycle movement.

As a rule, campus streets should be planted with deciduous canopy trees at least every 8 metres on-centre and provide foliage at a height of 5 to 12 metres above the ground, while allowing clear sightlines under the branches. The species should be consistent along any given street. Changes in species should be coordinated with logical shifts in road alignments or at intersections.

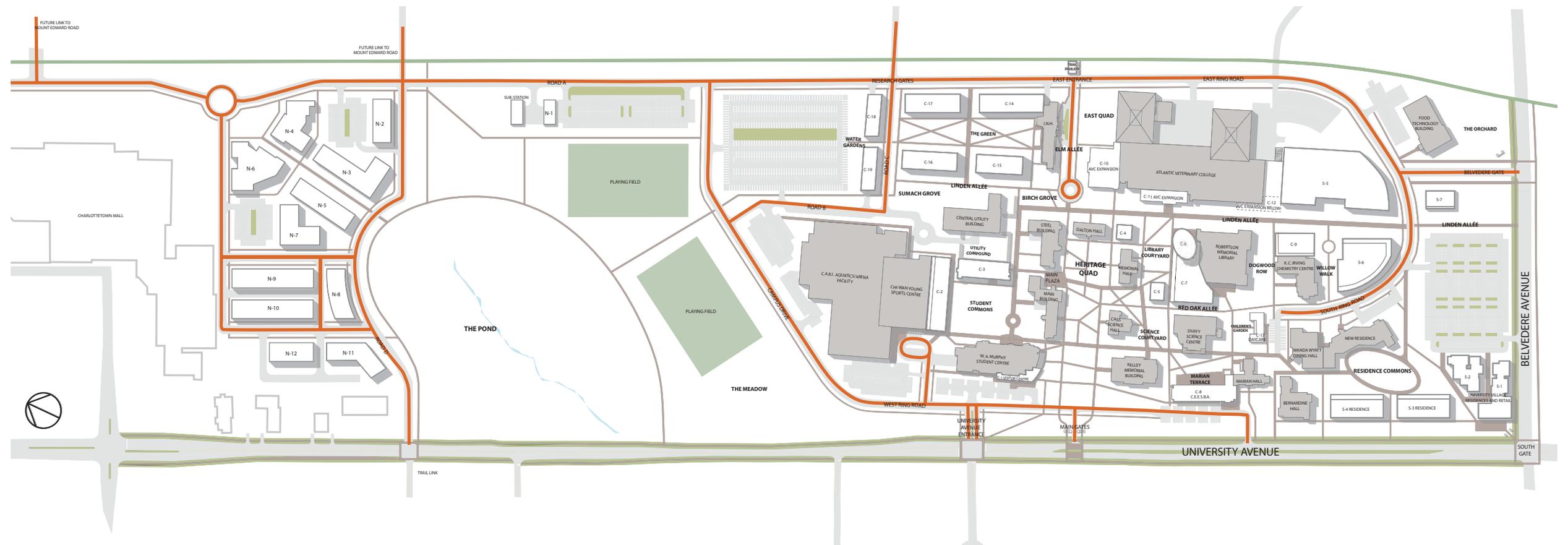
Arbitrary changes in species or mixing a variety of species along a street should be avoided in the interest of maximizing visual continuity. Exceptions can be entertained if the mixed species have a similar size, form and texture characteristics or where existing trees occur.

Every effort should be made to mitigate pedestrian and vehicular conflicts within campus boundaries and along Belvedere and University Avenues. To that end, the Pedestrian Circulation Plan indicates several changes to parking and streets. The Vehicular Circulation Plan highlights proposed street and parking systems.

- Sidewalks should line new roads, with a 3m planted buffer between the curb and the outside edge of the sidewalk.
- All sidewalks should be connected to the overall pedestrian network.



Wide asphalt paths invite drivers to cross through campus quads and courtyards: spaces that should be strictly limited to pedestrian activity.



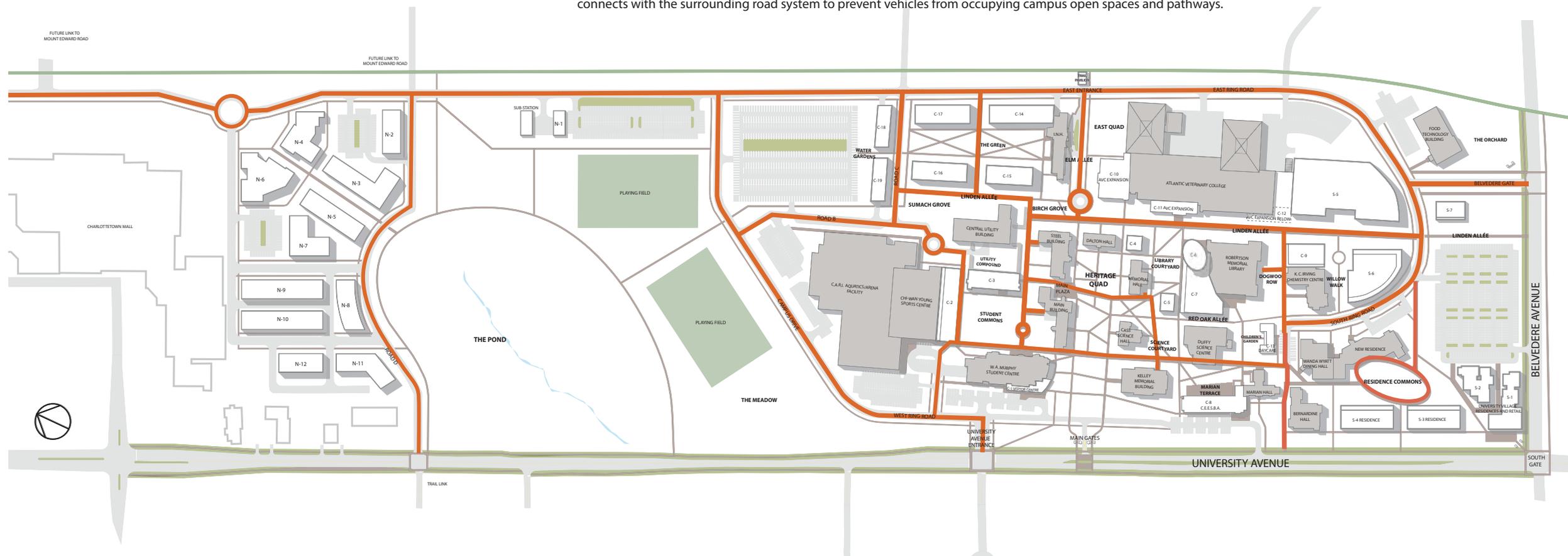
4.5.3 Service Vehicle Circulation/Shared Pathway

The campus environment remains one of the few contemporary urban environments where pedestrians predominate. Safe pedestrian spaces and green open spaces are preferred over the unplanned encroachment of buildings, roads and parking areas. As in any city, pedestrian/vehicular conflicts can be a major problem. Unlike a city though, most campuses are planned as pedestrian priority environments where roads and parking areas are accommodated in a non-intrusive manner.

To minimize a vehicular presence in campus open spaces and to enhance pedestrian safety, a service vehicle route has been designed to access all buildings. This route serves both regular maintenance vehicles that deliver goods and pick up garbage and emergency fire and ambulance vehicles. These routes are tied into the campus road network at several points. All building deliveries are to be made at designated service doors and should avoid main entrances.



All buildings need access from service vehicles: garbage collection, campus security, food services and emergency vehicles. These vehicles should follow a designated service/vehicular route through the centre of campus that connects with the surrounding road system to prevent vehicles from occupying campus open spaces and pathways.



4.6 Landscape Design Guidelines

Design guidelines establish general criteria to be used to direct future site design as the Campus Plan is implemented. While each new project will present its own set of unique opportunities and constraints, having design guidelines as a reference ensures that all projects developed over time can exhibit consistency in materials, forms and character, while simultaneously allowing flexibility for positive innovation. The goal is to achieve an integrated, coherent campus environment regardless of when each project is constructed.

4.6.1 Site Grading

Site grading must recognize existing drainage patterns while functionally solving drainage problems that may exist as a result of ground plane alterations during construction. Likewise, site grading must be sympathetic to existing landforms while providing appropriate transition of architectural elements to grade. Site grading must also provide for an uninterrupted flow of vehicular and pedestrian traffic through the University. The plan must direct and provide adequate flow of surface runoff to bioswales and catch basins while gracefully contouring the land to blend with existing conditions of the site.

Sensitive use of site grading can provide aesthetic qualities to the development; it can soften or highlight rigid architectural lines, create private spaces, screen objectionable views and add interest to flat sites that have little or no natural topographic interest. Drainage then becomes an integral part of the overall campus plan that fulfills basic functions while being visually attractive.



Grading should be designed so that lawns do not drain onto adjacent pathways where they pool in the summer creating mud soaked paths and freeze in the winter creating hazardous pedestrian zones.



Grading and drainage should be considered when designing around environmentally sensitive areas so that contaminated runoff does not enter into the wetland environment.

4.6.2 Planting Structure

Trees and other planting should not be thought of as superficial, decorative objects to be arbitrarily planted on the campus grounds, but should be considered as design elements that define basic spatial order and can, in turn, significantly influence the quality of campus life. The designed placement of trees in conjunction with the arrangement of buildings is the crucial design element for the campus.

All planting should be purposefully used to achieve desired functions and spatial effects to:

- define major open spaces, circulation corridors and entrances;
- limit or direct views;
- frame spaces to create compositional enclosure;
- create microclimates;
- establish an ecologically responsible, fiscally prudent landscape;
- reinforce the campus landscape.

The size of trees, shrubs and planting beds should be considered carefully with respect to the proportional relationship to campus buildings, roads, pathways, topography and nearby spaces. Tall, stately trees in rows along edges of formal open spaces and connecting corridors; or large clumps and sweeping masses of smaller trees and shrubs should be considered when planting on a campus wide scale.

Smaller trees, shrubs and perennials are appropriate choices at a garden scale, in small spaces or corridors, or at building entrances where people congregate. Overly intricate planting design is out of character and scale with the setting and should be avoided.

Scale is also important to the campus image and should be exploited through design considerations as a means to strengthen the sense of place campus-wide.



A variety of native plant material is planted in masses and edged with a narrow band of lawn. The lawn can be designed to the width of a riding lawn mower to ease maintenance and reduce hand trimming.



A mass planting of native roses creates an ornamental flowering wall without an intensive maintenance commitment in terms of pruning and spraying.



The simple design of a lawn bisected by a path and edged with deciduous trees creates a formal and beautiful space that is adaptable to many activities.



The shape of this gently sloped hill is accentuated by the mass of Eastern White Pines that sit on top. The pines contrast in colour and texture to offset the cropped plain of grass.

Selection of Plant Material

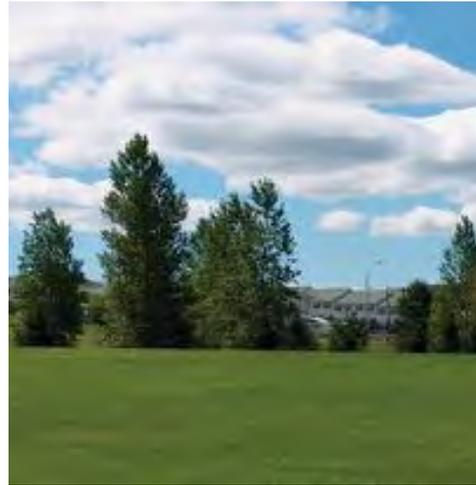
The selection of plant material should be predicated on the particular design function in the landscape. Landscape plans should specify plant material that is indigenous to the natural plant communities of PEI. In cases where non-invasive exotic plants are used to enhance the landscape, planting should be limited to those non-invasive species that are able to withstand the particular microclimate of the UPEI campus and require neither the use of fertilization nor pesticides.

Trees

It is important that the trees begin to establish a pattern or theme that will tie the campus together. Major trees or general canopy trees form a structure and add a feeling of permanence to the campus. These trees may be used for mass, to define, accent or soften architectural elements and to further define circulation systems and the spatial quality of open spaces. Planting size for major trees should be a minimum of 70mm caliper and larger, where possible. One of the main roles of major trees should be to reinforce pedestrian walkway systems, roadways and open spaces; screening of undesirable elements such as parking areas and service areas must also be considered.

Mature trees at UPEI lend a sense of history, permanence and strength to the institution's image. Guidelines for trees and other planting across the campus are intended to ensure that plants are used appropriately and can be maintained in a proper manner.

There is no general pattern of existing tree groups on the campus. Tree groupings appear inconsistently, varying between the formal arrangements in a few locations and sporadic placement throughout the remainder of the campus. Many existing street trees are Norway Maples planted at irregular intervals which does not create a strong edge or border. There are many opportunities to use formal, geometrically arranged plants along streets and arterial walkways, in courtyards and plazas and spaces defined by architecture.



Poplars naturally soften views to traffic on University Avenue.



Tree dedications should be actively pursued to connect UPEI alumni to a renewed campus forest.



Trees planted in clumps create a substantial landscape form that assists campus wayfinding.

- The minimum area for tree planting is 3m x 3m.
- Forty square feet of water and air permeable landscape area should be provided at the base of each tree, within the dripline, either by using a tree grate in high-traffic pedestrian areas or with groundcover and shrubs in low-use areas.
- Trees should be planted with a clear zone between the top of pavement and the bottom limb, of 2.5m above sidewalk; 4.5m above the street.
- Trees grates should be used in pedestrian pavement at locations of high pedestrian traffic such as plazas and terraces.
- The space between the finished grade of the tree and the tree grate should be filled with granular material to limit the accumulation of debris under the grate while still allowing air penetration.



A university courtyard is filled with a grove of trees that creates a natural structure all year.



Native trees species like the larch thrive at UPEI and root the campus in its larger landscape context.



A row of deciduous trees creates a powerful landscape form even during winter months.

Perennials, Shrubs and Planting Beds

Seasonal planting is an important part of the landscape palette and can contribute greatly to the campus appearance. Because of high maintenance requirements, seasonal planting should be located in fewer and larger areas to maximize its visual impact. Primary areas are building entrances, plaza and terrace edges and built-in planters. The consolidation of seasonal plantings will have an appropriate scale for the campus and will provide greater efficiency for maintenance.

Any tendency toward residential-scale gardening with intricate arrangements should be avoided. Residential-scale foundation plantings are inappropriate in a campus context. The preferred approach to shrub and perennial planting is to use masses of low maintenance plants

placed at buildings or other key locations to direct pedestrian traffic and provide visual interest. Simplicity of plant character in keeping with the architectural palette will create a unified composition properly scaled to the size and style of the building.

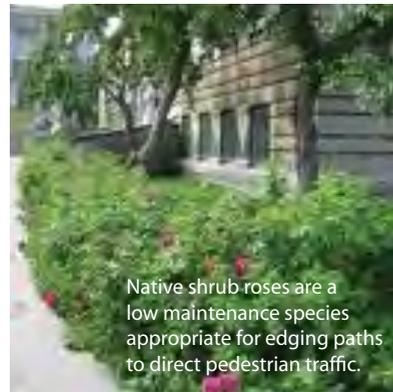
Depending on the quality of the foundation of the building, the absence of foundation planting can offer an opportunity to emphasize a building's architecture. Expanses of lawn extending to the foundations of buildings can create a symbiotic relationship between the architectural form and the accompanying landscape.

Vines

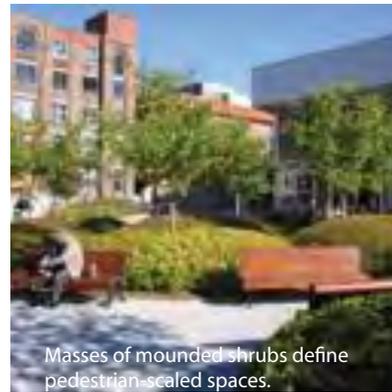
Deciduous vines like Boston Ivy and Virginia Creeper create visual interest on both contemporary and heritage buildings on campus. Leaves first emerge as bright green in the spring and turn a deep red in autumn at the start of the school year. Boston Ivy is drought tolerant and will grow in a variety of soil conditions. It can soften or articulate architectural edges, animate blank façades and help to naturally cool buildings in summer months. Its berries provide food for birds and squirrels.



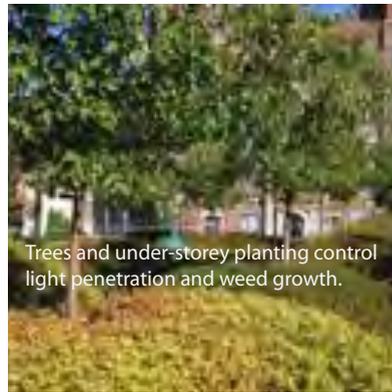
The residential scale and design of this garden are not appropriate for the scale and institutional program of the library.



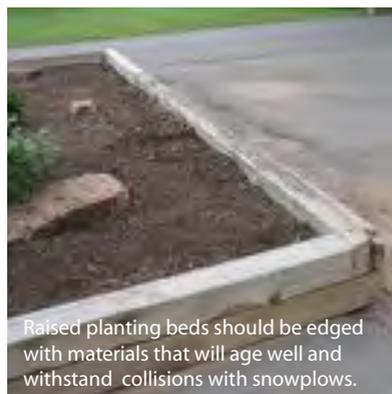
Native shrub roses are a low maintenance species appropriate for edging paths to direct pedestrian traffic.



Masses of mounded shrubs define pedestrian-scaled spaces.



Trees and under-storey planting control light penetration and weed growth.



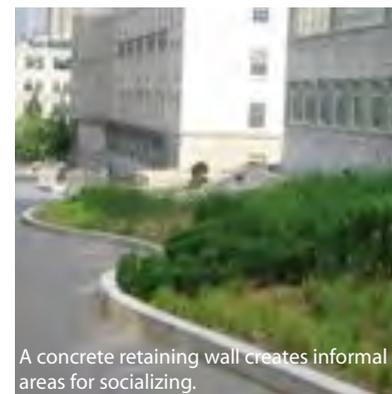
Raised planting beds should be edged with materials that will age well and withstand collisions with snowplows.



Ornamental grasses outside of the Student Centre are low maintenance perennials that maintain their form through the winter.



Mass planting of native roses contain a lawn and minimize grass trimming.



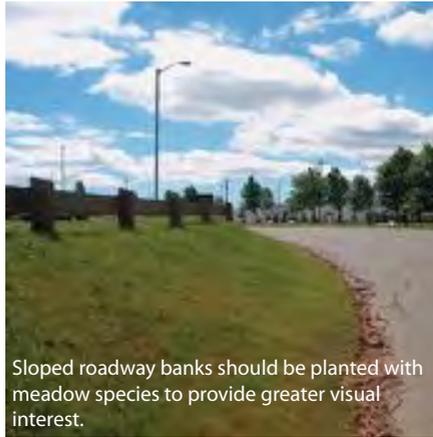
A concrete retaining wall creates informal areas for socializing.



Boston Ivy animates Dalton Hall to change with the seasons.



Boston Ivy drips over a concrete wall of Roberston Memorial Library.



Sloped roadway banks should be planted with meadow species to provide greater visual interest.



Tiered banks beside the C.A.R.I. building should be planted with meadow species or vines to beautify this corner.



A groundcover with a more intensive root system will help to stabilize the sloped area around the library.



The sloped areas around the Central Utility Building should be planted with meadow species to minimize mowing maintenance and to emphasize the sculptural quality of the building.



The plateau of the sports fields drops off toward the environmentally sensitive naturalized land to the north. The hillside transition between the manicured and the natural should be planted with short meadow species.

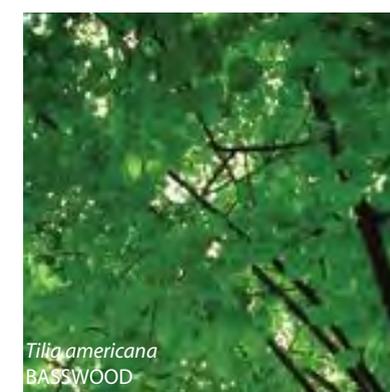
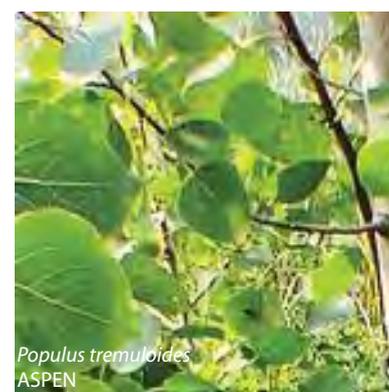
Groundcovers

Sloped areas should be planted with groundcover species that will stabilize the topsoil and keep it from eroding and washing onto abutting path surfaces. Areas where the slope is greater than 3:1 should be hydroseeded with a native meadow mixture that will provide texture, colour, seasonal interest and will create an aesthetic foil for adjacent mown areas.

The sloped landforms that hug the Central Utility Building and the hillside north of the sports field plateau are areas that would benefit from a diverse planting of mixed meadow species. The difference in texture would visually accentuate the landforms while the surrounding lawns would ensure that they retain a cared-for appearance.

4.6.3 Planting Palette

Recommended Deciduous Trees



Recommended Coniferous Trees



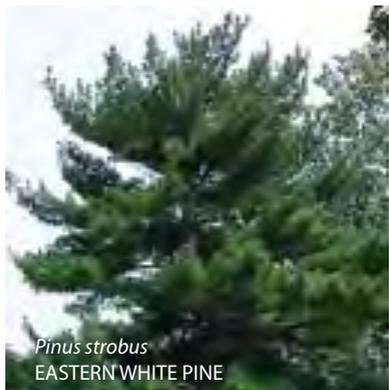
Abies balsamifera
BALSAM FIR



Larix laricina
LARCH



Picea mariana
BLACK SPRUCE



Pinus strobus
EASTERN WHITE PINE



Thuja occidentalis
EASTERN WHITE CEDAR



Tsuga canadensis
HEMLOCK

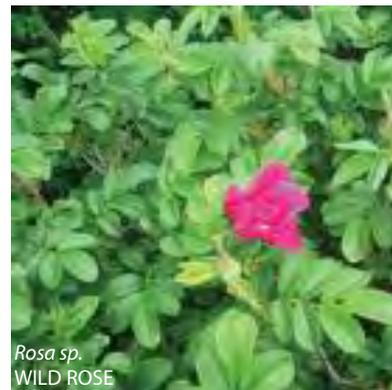


Picea rubens
RED SPRUCE

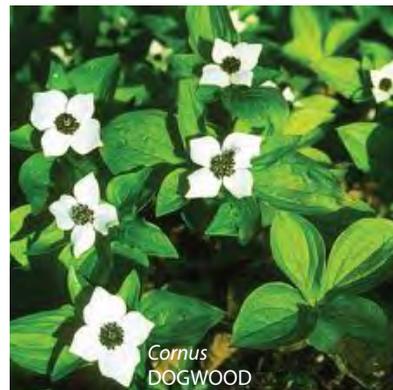
Recommended Shrubs and Smaller Trees



Rhododendron
RHODODENDRON



Rosa sp.
WILD ROSE



Cornus
DOGWOOD



Amelanchier
SERVICEBERRY



Malus
CRABAPPLE



Hamamelis
WITCH HAZEL

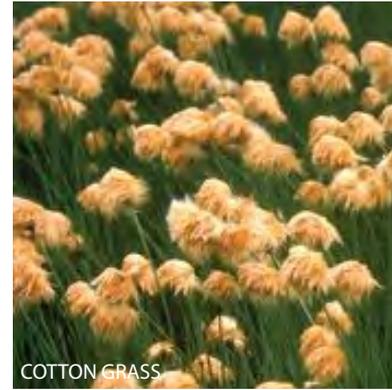
Recommended Perennials and Groundcovers



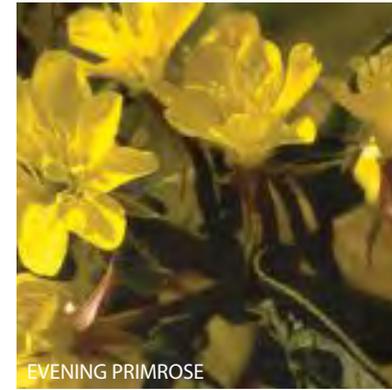
BINDWEED



CLOVER



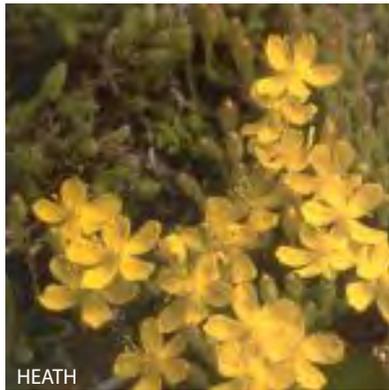
COTTON GRASS



EVENING PRIMROSE



EVERLASTING



HEATH



HOP CLOVER



LABRADOR TEA



LOOSESTRIFE



LUPIN



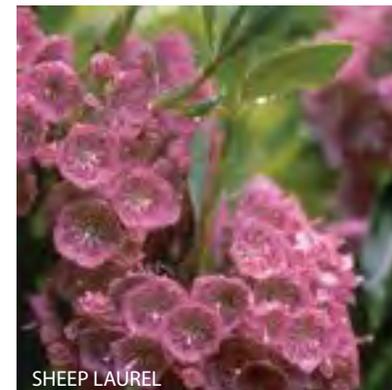
MILKWEED



QUEEN ANNE'S LACE



SEA LAVENDER



SHEEP LAUREL



VIRGINIA CREEPER

4.6.4 Lighting

Light fixtures, in addition to providing for safety and security, should be installed as design elements to provide visual continuity between different campus areas.

Lighting should be integrally designed as part of the built environment and should reflect a balance between lighting needs and the contextual ambient light level and surrounding night-time characteristics of the campus. Recommended light level guidelines and uniformity ratios established by IESNA (Illuminating Engineering Society of North America), should be considered when determining appropriate lighting design solutions together with the goals and standards of the LEED® program.

Three fixture styles should be chosen for the campus – one for streets, one for walkways and one for parking areas.

Streetlights should have a mounting height of 7-9m. Fixtures should be spaced at 33m and alternate on each side of the street. (A light located on the right side of the street will be 33m away from a light located on the left side of the street.)

Pedestrian fixtures along primary and secondary paths should be mounted at a height of 3.5 to 4m and spaced 15-20m apart; they should also coordinate with tree spacing.

New fixtures for parking areas should provide better light distribution and glare control than the existing fixtures, and minimize light pollution.

Accent lighting for entry identifiers and other special features is recommended to enhance campus appearance and visual organization, as well as to highlight entrances and architectural details.

The recommended type of luminaire is metal halide. It offers high efficiency and a relatively white colour. The type of luminaire should be consistent with all fixtures and locations on campus.

- **Light fixtures should be utilized as design elements to reinforce campus structure and organization.**
- **A standard set of light fixtures should be chosen for walkways, streets and parking areas.**
- **Metal halide luminaires should be chosen for all light fixtures.**
- **Lighting should be designed to minimize glare, light trespass, maximize energy conservation and to maintain dark skies.**
- **Automatic controls systems should be considered to eliminate excessive light during non-active hours of site and building operation.**

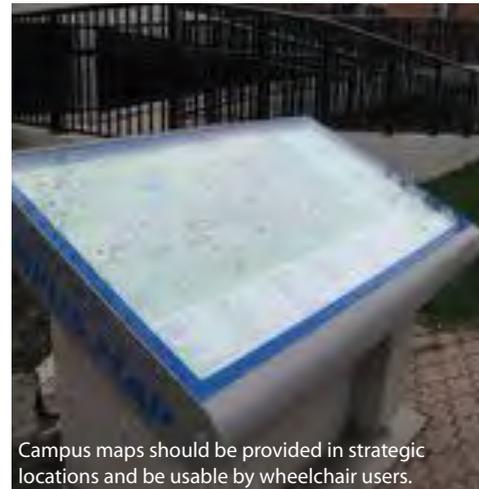


Example of light fixture appropriate for use in the vicinity of heritage and contemporary buildings.

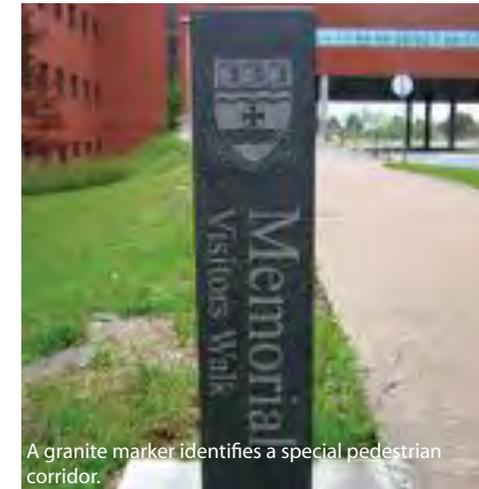
4.6.5 Signage

Signage should reinforce the pedestrian scale of the campus, communicate effectively and project a clear, organized impression of the University. It is recommended that a new campus signage plan be created and a system of more legible signage be introduced throughout the campus. A full range of signs that display a hierarchy of scale and importance should be developed. Signage should be selected with recognition of the materials palette of the campus.

- Vehicular, pedestrian, directional, identification and informational signs should reflect a standardized graphic format, size, proportion and colour in order to create a basic vocabulary and make them instantly recognizable and understandable.
- Directional signs should be at a scale appropriate to passing motorists without impinging on the overall pedestrian scale of the campus.
- Signage should also accommodate the needs of the physically and visually disabled.



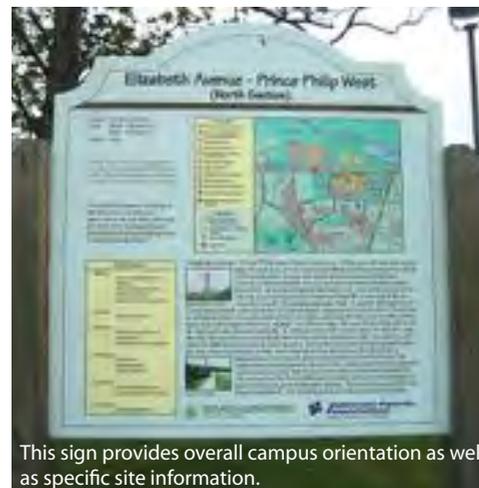
Campus maps should be provided in strategic locations and be usable by wheelchair users.



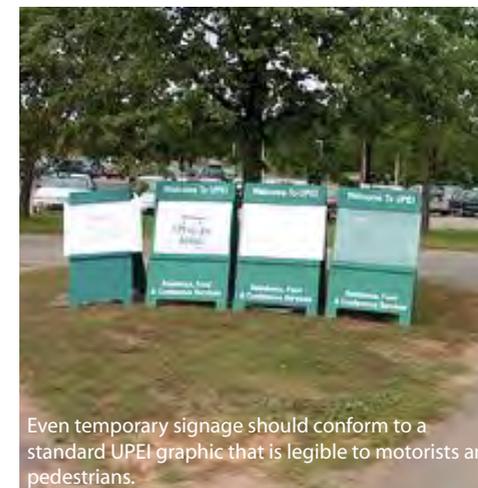
A granite marker identifies a special pedestrian corridor.



Permanent directional signage and maps should be located throughout at key areas on the campus.



This sign provides overall campus orientation as well as specific site information.



Even temporary signage should conform to a standard UPEI graphic that is legible to motorists and pedestrians.

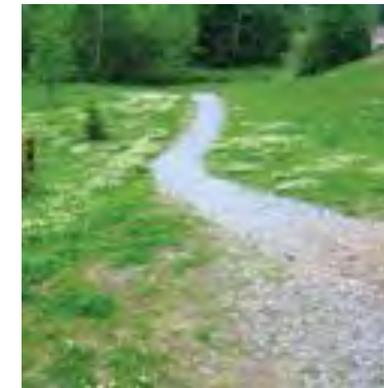
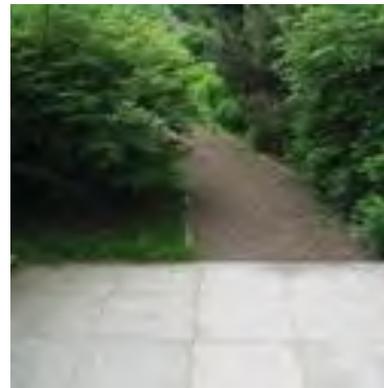


Commemoration plaques should celebrate UPEI alumni, faculty and staff to promote awareness of contributions by individuals.

4.6.6 Paving Materials

Pedestrian pavement is intended to be a background element that allows the activity of the surrounding use to predominate. Pavement materials should always be used in their primary forms and not as an imitation of other materials.

- Pavement materials should be used in their elemental forms, such as concrete, plain or with exposed aggregate, or precast concrete pavers or brick.
- Coloured or stamped concrete should be avoided since it is difficult to match the same pattern and colour with future patching.
- Pedestrian pavement should be designed to accommodate people with disabilities in width, slope, contrasting banding and finish.
- Pedestrian/cyclist crosswalks should be clearly marked with distinct paving and should include curb cuts for those in wheelchairs and scooters. All crossings should be sited for safety as well as design integrity.



Pedestrian paving can have a variety of forms, but always incorporates smaller elements in its detailing that give it visual interest and a pedestrian scale.

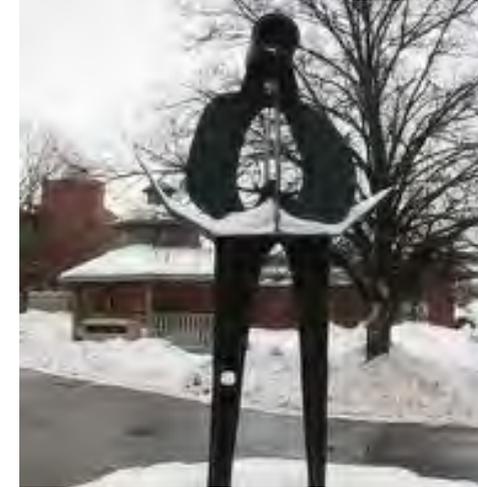


The bottom row of photos are examples of pavement that does not contribute to a pedestrian environment, either in its materiality, its disrepair, or the way it has been installed.

4.6.7 Outdoor Art

Outdoor art sited throughout the campus can enrich the landscape, showcase local and international artists, and further attract the community onto the campus. The care and superintendence of outdoor art, interpretive displays, and exhibits should be designed to promote understanding of Prince Edward Island's unique cultural heritage, as well as to promote cross cultural dissemination.

- For new work, contracts with artists should specify maintenance and installation requirements of the work, whether the work is permanent or temporary.
- Outdoor spotlighting should illuminate the work.
- Outdoor art should be incorporated into the campus plan so that it acts like signage and enhances the pedestrian experience.



Outdoor art should be placed in a planted context that will highlight it to its best possible advantage. The background and base should be considered to compliment the art throughout the year.

✦ PROPOSED SITES FOR OUTDOOR ARTWORK





Service areas should be screened with wood or masonry walls as well as planting.

4.6.8 Service Areas

Efficient service areas are critical to the operation of the University, but they should not detract from the pedestrian experience on campus. Service areas including loading docks, dumpsters, tanks and at grade mechanical units should always be screened to the greatest extent possible.

To minimize views of large service vehicles, including pickup trucks, distinct service/pedestrian pathways have been designed to access each building on campus through a connected network.

Outside the Equipment Depot is a storage yard for most service vehicles on campus. To minimize the unattractive quality of heavy machinery storage and to better connect the pedestrian network, it is recommended that masonry walls enclose a small parking area on the west side of the Central Utility Building. It is recommended that a satellite service area (N-1) be constructed in the North Campus to provide space to park the remaining vehicles. This service area would be 20m x 20m and would provide space to park vehicles as well as locate a small storage shed, all of which should be screened from view by an enclosure wall.

Such a facility would provide a secure location to park large vehicles, transfer materials and equipment to smaller, more campus compatible vehicles and a temporary storage area for materials.

Large Waste Containers

In addition to the satellite service area, smaller enclosures should be designed for trash dumpsters. Dumpster locations should be consolidated to service three to four buildings each.

Specific locations should be considered to correspond to the service vehicle access route to ensure the most efficient location.



4.6.9 Site Materials and Furnishings

Site furnishings include functional elements that help to establish and reinforce the image and character of the campus. Benches, bicycle racks, waste receptacles, bollards and parking barriers should have a standard form throughout the campus to unify the grounds visually, to reduce maintenance and to simplify replacement.

- A collection of site furniture should be selected for its durability, its compatibility with the PEI climate and its availability for additional purchases in the future.
- Canadian made site furniture should be chosen for ease of distribution and to ensure that it will withstand Canadian winters.
- Colours and materials of site furniture should be coordinated as much as possible. Painted finishes should be avoided; the natural colours of materials will enhance UPEI's park-like setting and minimize long term maintenance.
- Different types of site furniture should be grouped together - ash urns, benches, trash receptacles - to enhance use and avoid clutter.
- Site furniture including light posts, signage and furnishings, should be placed out of the way of emergency and maintenance vehicles, especially snow removal vehicles.

The following materials and furnishings are recommended for use on the University of Prince Edward Island Campus. The photographs and descriptions are intended to convey the desired character, not specific manufacturers or exact styles.

Benches

- Seating should be provided throughout the campus to promote collegiality and enhance the outdoor character of the campus.
- Seating should be located in groups and individually at building entrances, in gathering places and along streets and paths.
- Use one or two standard benches that are comfortable and durable in all weather. Benches should be linear in design, with a metal frame and wood slats. Benches without backs are useful where seating is accessible from either side.
- Seating height should be between 35-55cm from the landscape grade with seat depths between 35-55cm. Appropriate materials for seating include low walls, large boulders, as well as benches.



Bench Type B is chosen for use in the Heritage Quad.

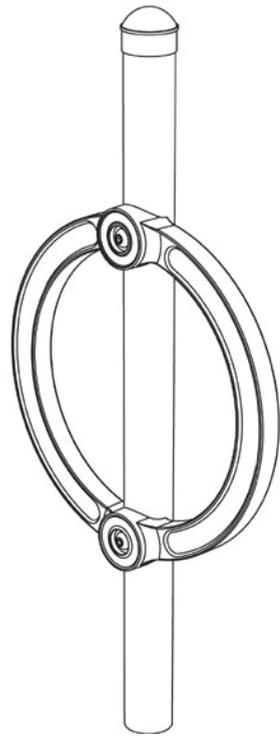
Two bench types are proposed: Type A for general campus use and Type B for the Heritage Quad. For special or unique areas, such as the student courtyard, other bench styles may be appropriate. Type B reflects a traditional quality compatible with the architecture and setting of the Heritage Quad. Type A is complementary to Type B, but is less traditional in character; it has a contemporary and timeless style that will match various architectural and open space settings.



A backless bench should be used when seating is accessed from both sides.



Type A: The above bench type is chosen for use generally throughout the campus. This bench model is also available in a backless version.



Bicycle Racks

Bicycle racks should be placed close to all main entrances of buildings to promote non-motorized transportation. They should be placed in such a way that they do not interfere with pedestrian movement or snow removal, but should be within view of the main building entrance to promote casual surveillance. Conveniently located bicycle parking will deter the unauthorized locking of bicycles to railings.

- All bicycle parking areas should utilize standard racks, have concrete paving and be visible from the inside of the building.
- Provide bicycle racks at entrances to all campus buildings.
- Locate bicycle racks where they do not interfere with pedestrian or wheelchair movement, general maintenance requirements or snow removal.

Planters

To simplify maintenance, instead of flower beds, seasonal colour can be added to the entrances of buildings with large plant containers. Planters should have a permanent character that corresponds to surrounding architecture. They can be used as retaining walls and as casual seating around building entrances.

- Planters should be made of durable material like concrete and be of a size that is proportional to the institutional nature of the campus buildings.



Bike racks are placed outside of the main entrance of a university building for convenience and security.



Permanent, built-in planters should be used for grade transitions, to direct traffic, and to separate pedestrians from vehicles.



Planters should have a permanent quality and should match adjacent architecture in materials.

Trash Receptacles

- Trash receptacles that have separate divisions for recyclable materials should be chosen for the campus to be consistent with PEI's "Waste Watch" program.
- Trash receptacles should be placed at strategic points throughout the campus: at entrances to buildings, plazas, bleachers and other gathering areas.
- Ash urns should be located near building entrances and outdoor smoking areas. They should however, be sited 4.5m minimum from doorways.
- Trash receptacles should be chosen for their durability and their ability to sustain periodic power washing.



Metal trash receptacles with plastic liners should be chosen with separate sections for recycling.

Bollards

- The use of bollards should be avoided through comprehensive site design.

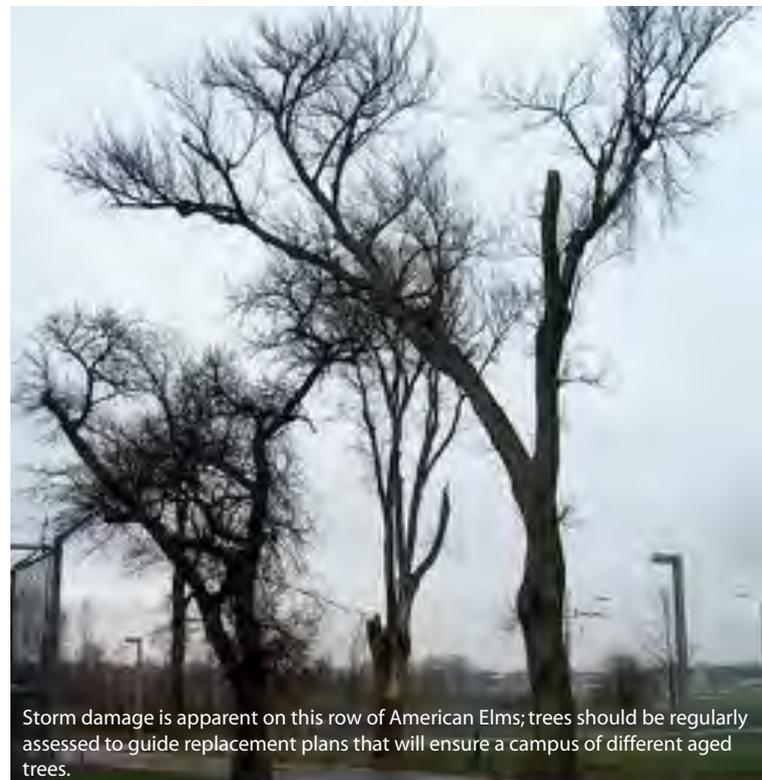


Pavement widths and a comprehensive path system will make the use of bollards to block traffic unnecessary.

4.7 Preservation, Protection and Rehabilitation

To preserve the visual identity and heritage of the University, continuous efforts should be made to prevent loss or damage to the historically important landscape features of the campus. With this principle as the underlying mandate, the following actions should be considered in order to preserve and protect the distinguishing characteristics of the campus.

- At the initiation of a building project, preliminary landscape design goals should be identified. This should include anticipated costs for construction and maintenance of a comprehensive landscape design.
- A maintenance plan should be provided for reference by grounds crews for each landscape installation and should include: the planting plan, plant list, statement of design intent and annual maintenance recommendations.
- An inventory map of existing campus trees, shrubs and perennials should be updated yearly.
- Trees should be planted on the northern edge of the campus to deter unauthorized use of the campus and to enhance views from the campus to the back of the Charlottetown Mall.
- A wayfinding and signage plan should be completed.
- A long term maintenance program to assess the health of existing campus trees and large shrubs, a preservation protection policy and routine scheduled maintenance on selected specimens should be implemented. These policies and plans should be proactive rather than reactive so that pests or diseases cannot take hold.
- A succession tree planting plan should be initiated to ensure that as older trees die, adjacent mature trees will be in place.



Storm damage is apparent on this row of American Elms; trees should be regularly assessed to guide replacement plans that will ensure a campus of different aged trees.

4.8 Site Design for Construction Projects

Future planned campus expansion and intensification should be balanced with and directed by quality open spaces. Site improvements, whether independent or associated with a building, affect the immediate and overall campus landscape. Project types, each with its own set of requirements, can be grouped into several categories: buildings, circulation, utilities, outdoor gathering and landscape restoration/enhancement. It is essential that landscape design be funded regardless of whether it is the primary focus of the project.

Site improvements should be part of the planning and design of all new building or renovation projects on campus. The landscape is important to create an inviting and collegial environment outside, as well as inside the building, to connect the building to its larger campus setting and to clarify circulation and wayfinding.

- Site improvements should be required as part of the design and construction of all new buildings.
- Unique or particularly attractive natural features should be retained.
- Existing buildings should be enhanced with new planting.
- Massed plantings of trees, shrubs and groundcovers should be used to integrate the building with its site and the surrounding campus.
- Planted areas should be designed to capture runoff from roof drains.
- Primary building entrances should be highlighted with mass plantings of ornamental species.
- Existing trees should be protected from damage during construction.
- Trees should be planted far enough away from the building envelope to allow them to grow to their full symmetrical potential.
- Pathways that tie into existing campus pedestrian circulation network should be provided.

- Materials that complement the buildings architecture and that unite the project to the larger campus context should be chosen.
- Routes for emergency access, servicing and snow removal should be designed to be aesthetically pleasing all year long.
- Seating should be located to enhance areas for study, eating and conversation.
- Adequate space for snow removal and storage should be designed into each project.
- Permanent bicycle storage should be provided in the site design for all new buildings.

Landscape Restoration

- Landscape restoration should be required of all new construction projects immediately after damage has occurred to minimize soil erosion and habitat degradation, and to enhance the campus.
- Interpretive signage should be located near areas of pedestrian activity to raise awareness of the value of native habitat and the measures taken toward restoration.
- If a landscape is to be modified, existing trees and vegetation should be retained where possible to be incorporated into the new site design.
- If tree retention is not feasible, the tree should be relocated on site or on another site on campus.
- Existing trees at UPEI should only be removed if:
 1. The health or safety of the community is in jeopardy;
 2. The tree is diseased and the state of surrounding trees is compromised;
 3. The tree is dead;
 4. University landscape renovation necessitates tree removal;
 5. University land development necessitates tree removal.
- A tree removed because of land development should be replaced at a ratio of two for one minimally in the course of a new landscape design for the building.

Utilities

Utilities will be required for all new or revitalized projects within the campus; the guidelines aim to ensure that they are placed to meet operational and aesthetic criteria.

The location and design of above ground utilities, enclosures and service areas should be coordinated to aesthetically comply with the adjacent architectural massing and materials.

Outdoor electrical outlets should be provided in places where special events take place: for seasonal lighting, outdoor concerts and university ceremonies. Outlets should be located where they will not be damaged and can be integrated into the adjacent landscape.

4.9 Outdoor Gathering

Gathering places should be designed for all seasons. They should provide interest, encourage interaction and facilitate movement between adjacent buildings. Quads, courtyards, and terraces, as well as taxi stops and building entrances, should use a distinct paving material to define them as pedestrian instead of vehicular.

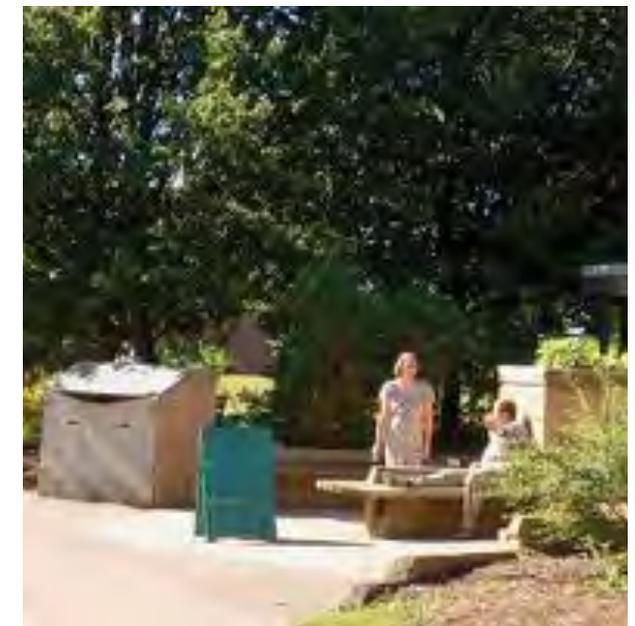
- A variety of seating arrangements should be provided for conversation, people watching or quiet contemplation.
- Seating should be oriented to take advantage of the sun at all times of the year; deciduous trees should be planted around seating areas to provide shade in summer months and allow sun exposure in winter months.
- Adequate space should be provided for snow removal and storage.
- Predominantly native species should be used for quads, courtyards, and building entries with ornamental species used as accents.



Steps, landings and entrances to buildings are natural gathering places that can be furnished to encourage more socialization.



The entrance to the library collects people enjoying a break from studying. Benches and pedestrian paving could facilitate socializing.



A bench outside of the Kelley Memorial Building gets southern sun exposure, but could benefit from improved site furniture.

4.10 Parking Design

The needs of the pedestrian are at the heart of the campus planning project. Academic and social exchange among students, faculty, staff and the community at large are fundamental to the success of the institution. These exchanges are most likely to take place in comfortable, attractive and meaningful spaces on campus. However, as more and more land is relegated to parking lots, spaces for interaction fragment or disappear, landscapes degrade due to environmental stress and the scale of the campus life subtly shifts from that of the pedestrian to the car.

While the car must be accommodated, it should not be the central force behind planning efforts. Relegating a proportion of parking to structures, to the periphery of campus and by providing drop-off locations and barrier-free lots and service access to the campus core, acres of lifeless vehicular storage space can be freed for use by people. Locating parking and vehicular access away from the centre of campus can minimize pedestrian/vehicular conflicts.



Large expanses of asphalt should be mitigated by planted islands to improve the space visually and environmentally.



Metered visitor parking anchors the bottom of the Heritage Quad.



Five percent of the total number of spaces should be reserved for users with mobility challenges.

Proposed Parking Map

New and modified parking areas are proposed in order to minimize the visual and functional impact of parking within major pedestrian corridors. All parking lots should be screened with planting along all perimeters.

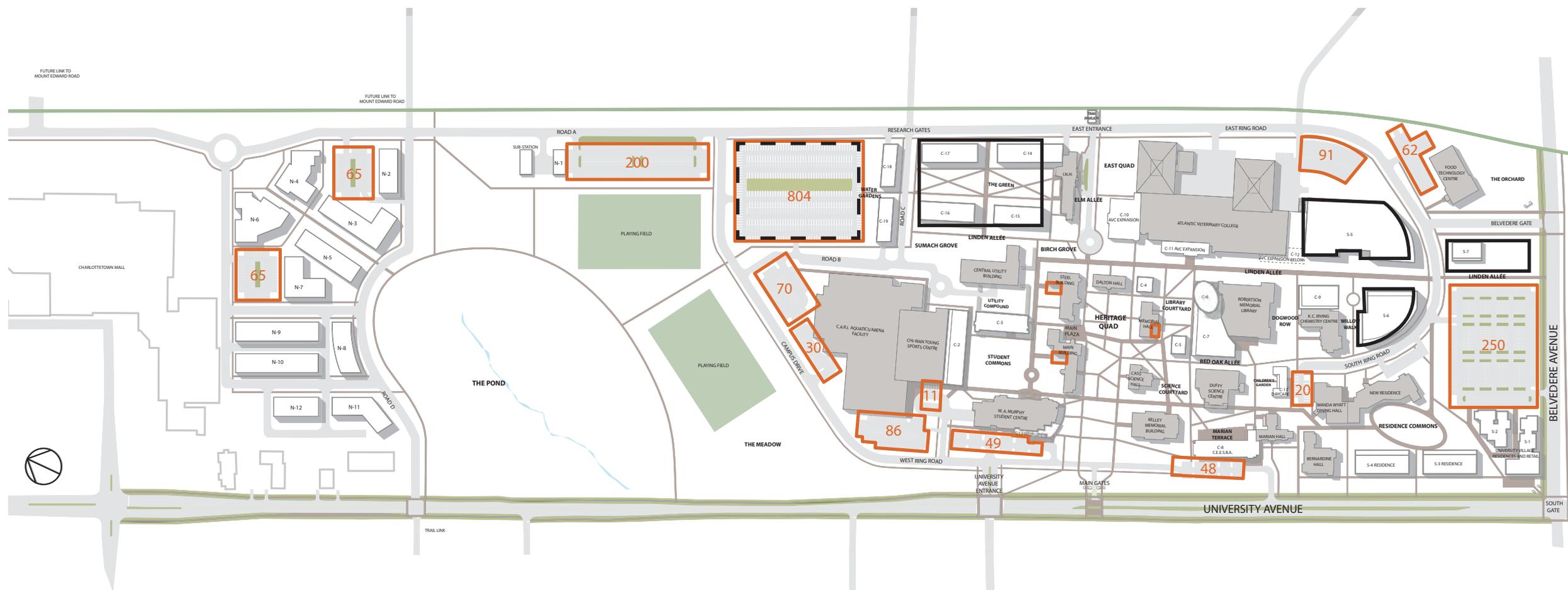
Parking modifications are shown on the Parking Plan.



POTENTIAL FUTURE AREAS FOR UNDERGROUND PARKING



POTENTIAL FUTURE AREAS FOR DECK PARKING



Open Space



Parking Lot Design Guidelines

Where surface parking does exist within the campus core, the following guidelines are recommended

- Site improvements should be required on the design and construction of all new parking lots.
- Off-street parking should be located in the rear of buildings or in interior parking lots shared by a number of buildings.
- On-street parking should not be permitted in front of building entrances.
- Remote parking lots outside of the core may be large, but should incorporate planting to minimize their impact on surrounding areas.
- The perimeter of parking areas should be screened to minimize views of cars; shrub masses as well as trees should be planted to ensure that foliage and architecture dominate views within the campus.
- Internal areas within parking lots should incorporate planted islands.
- Planted areas should be a minimum of 30 square metres to allow for planting of both trees and understory species.
- Parking areas should be graded to drain toward planted areas surrounding the lots, or to contiguous islands within the lots instead of toward storm sewers in the middle of lots. These planted areas will act as bioswales to filter runoff water.
- One deciduous tree for every 10 surface spaces is the recommended planting ratio.
- The ratio of parking spaces reserved for users with mobility impairments should be 5% of the total number of spaces on campus.



5 Transportation



5.1 Parking and transportation issues

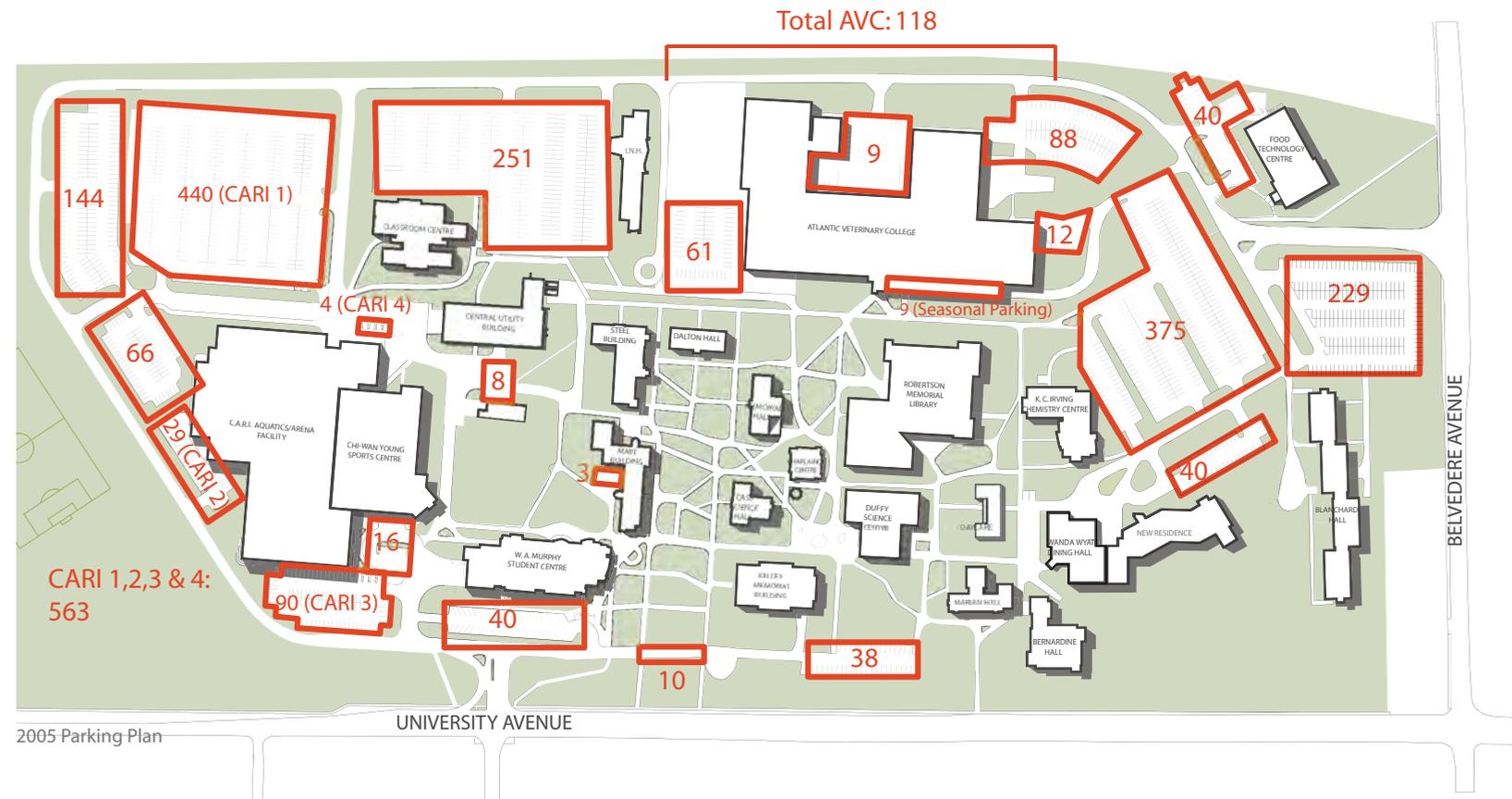
The total number of parking spaces on campus in 2005 will amount to 1,439, or 0.35 space per campus member (2.8 members per space) assuming a full-time population of 4,077. Adding 400 spaces in the CARI parking area, which are accessible to the UPEI community, the total number of spaces climbs to 1,839, or 0.45 space per campus member (2.22 members per space). These figures do not include the Farmer's Market lot which is used informally by students.

Parking is a key issue on campuses throughout North America. On many campuses, abundant and conveniently located low-cost parking is perceived as a necessity. However, there are also many examples of universities that have created virtually car-free core campuses through a multi-pronged strategy including satellite and peripheral parking lots,

progressive pricing, transit, emphasis on walking and biking, and below-grade or structured parking solutions.

With abundant free parking, good roads and affordable vehicles, residents of cities have moved into the countryside, away from historic urban areas, thus increasing their reliance on the private automobile and rendering the provision of transit service inefficient and/or expensive. This is especially true in Prince Edward Island where no transit system has historically been in operation and where students, faculty and staff have always travelled from outlying communities. In recent decades, surrounding low-density development has led to the physical urban area of the Charlottetown region to grow faster than its population. As a result, the city has an increasingly scattered and discontinuous urban structure which has long prevented the provision of transit services while fostering automobile dependency.

If this trend is not reversed, the inelastic (i.e. not influenced by price) demand for parking will continue to exert pressures to increase parking supply in tandem with enrolment and staffing growth. If current trends continue, new parking areas will have to be identified on university land or nearby properties at a significant environmental and financial cost. Often, although it is not necessary, trees are removed and polluted runoff is disposed of without prior retention and filtering. Furthermore, this dependence on parking may lead to resistance to redevelopment in prime locations of the campus. An alternative to new surface parking lots is to build structured parking as decks and below-grade parking beneath new buildings, but extensively replacing surface parking with structured parking is an expensive proposition.



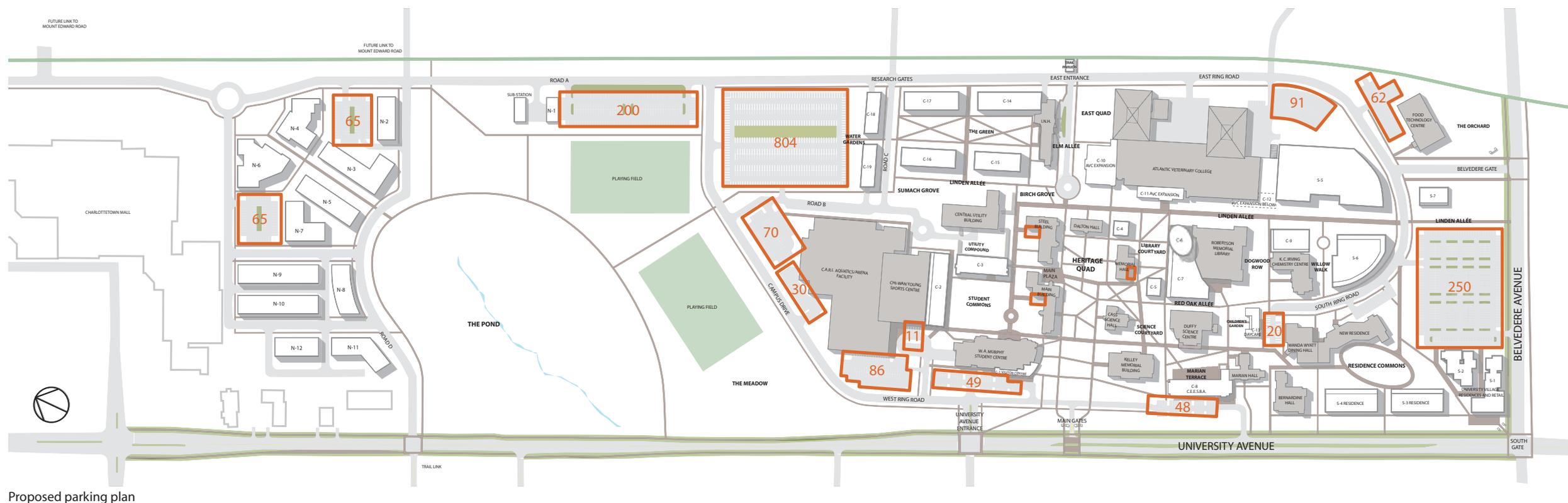
5.2 The Parking Plan

The Campus Plan's 50-year scenario illustrates a total build out of the current land holdings and proposes a total of 2,880 parking spaces, including 1,443 surface spaces, 1,239 spaces in above-grade parking structures and 663 underground spaces as shown below.

It is unlikely that this scale of structured parking will be deemed a priority for investment of University funds until such time as scarcity of parking brings rates to a level that can amortize this investment. It is therefore probable that surface parking lots will continue to be the principal means of parking. These surface lots may be provided as an interim land-use on sites slated for future development. In particular, the North Campus development area can provide up to 1,500 spaces serving as a satellite parking facility.

Alternatively, the University may acquire additional land in the vicinity of the campus, or enter into agreements with adjacent land-owners, to provide space for surface parking lots. These lots should preferably be within a 10-minute walk to the periphery of the core campus or be serviced by a shuttle. Agreements can be pursued with owners of unused or underused parking lots throughout Charlottetown, where campus users can drive or walk to and catch the bus or a shuttle.

The Campus Plan proposes as a sustainable development policy recommendation that the ratio of parking spaces per campus member be reduced from the current .40 spaces per campus member (spm) to .25 spm by 2015. This ratio is in keeping with other Canadian universities located in non-urban centre areas. This objective can only realistically be achieved through an effective transit system and other transportation demand strategies. In the period between 2015 and 2025, this ratio should be further reduced to a ratio of .15 spm.



Proposed parking plan



The storage of private automobiles is becoming a headache for many universities.

5.3 Transportation Management Strategies

The adoption of transportation demand strategies can help prevent the demand for parking to grow proportionately with enrolment:

- *Residences* – students who live in residence are less likely to bring a car on campus. The addition of residences on campus and the encouragement of residence living can help to reduce the percentage of students who commute to the campus. Pricing strategies can be adopted to discourage students living in residence from parking a car on campus.
- *Carpooling* – carpooling can be encouraged within the campus community to reduce the number of single-occupant vehicles entering the campus each day. A carpool website can assist commuters to find and organize rides and preferential treatment can be granted in pricing and parking space location to car pools. Carpooling can be encouraged by raising parking fees. Currently, despite recent increases, the price of parking at UPEI is low compared to other comparable universities. Raising parking fees can also assist the University in implementing improved parking lot design (such as the integration of trees and swales for the management of storm water runoff). Increased fees may also be used to contribute to the construction of structured and underground parking.
- *Scheduling* – scheduling changes can be made to smooth out peaks and troughs in campus attendance. Peaks cause parking facilities to be heavily used only at certain times of the day – not unlike shopping mall parking lots in the holiday season. Ensuring a more constant level of use will mitigate perceptions of parking deficiencies.
- *Transit* – transit is the most promising avenue to reducing parking demand as a large number of students can be encouraged to arrive on campus by bus instead of by car.

Three distinct transit user groups can be identified and should be catered to separately:

- On-campus residents – an effective transit system can replace the need for residents to have a car on campus. This group would most benefit from a system that runs nights and weekends, mainly along University Avenue and to downtown.

- Students living at home – this is the hardest group to serve because its members have not chosen their place of residence and are likely to be scattered geographically. This population is also most likely to own and use a car. This group can best be served with a limited number of transit routes to key areas like Cornwall and Stratford and routes to off-site parking lots.
- Students living on their own – this group is mostly composed of off-island students and is the easiest group to serve, due to their ability to choose a place of residence based on the availability of transportation alternatives.

Charlottetown's new transit will provide significant environmental benefits and increase UPEI's ability to attract and retain environmentally conscious students, faculty and staff.

- *Walking and Cycling* - the Campus Plan acknowledges the importance of pedestrian and cycling routes to the campus. Improvements include wider and safer sidewalks on University Avenue, clear connections from Confederation Trail to the Campus, more signalized crossings as well as designated bicycle routes and amenities on campus (e.g. sheltered and secure bike storage and access to showers).

Further detailed parking and transportation recommendations are contained in the UPEI Campus Plan Implementation Guide.

6 Sustainability





Green roofs reduce the heat island effect, retain water, provide insulation and promote evapotranspiration.

Brook McIlroy Inc.

6.1 Definition

In 1987, the World Conference on Environment and Development defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). Since then, sustainability has been understood as the need for all development to take place in an environmentally, socially and economically responsible fashion - over the long term, rather than the short term.

6.2 Purpose

In every community, universities are entrusted with the role of catalyst for change, acting as a source and champion of innovation in the development and application of knowledge, technology and ethics. As a major community leader, employer and educator, UPEI’s influence ranges from the community to the national scale. In light of this impact, it is clear that the transformation of the campus into a catalyst for environmental sustainability should be an integral part of UPEI’s mission.

Increasingly, students, faculty and staff have strong views about the health of the environment, and have expressed their opinion about the use of pesticides, the sourcing of food on campus, the origin of clothing sold in the bookstore and the preservation of the natural environment around campuses. Universities themselves are increasingly realizing that some environmental initiatives not only result in a healthier environment in the long term, but can have an effect on the bottom line within a relatively short term. For instance, energy savings as a result of the replacement of light bulbs with power-saving models or window replacements yield recognizable savings in operating costs. In addition, a sustainable campus can:

- Enhance the reputation of the institution and serve as a recruiting tool for faculty, staff and students;
- Provide opportunities for research and information sharing;
- Help fulfil Canada’s international emissions reduction commitments;
- Contribute to a healthier campus and local environment.

Because sustainability impacts virtually every aspect of campus growth and operations, sustainability principles have permeated the entire Campus Plan. This section captures and summarizes key initiatives that

should be pursued to make UPEI a leader in sustainability, both among Island institutions and Canadian universities.

The Campus Plan must be accompanied by a UPEI Sustainability Strategy. Following the adoption of the Campus Plan, UPEI should contemplate the preparation of a comprehensive sustainability strategy built on a highly developed consultation strategy which leads to a set of detailed and precise principles, goals, targets, actions and an implementation plan against which progress can be measured.

6.3 Status

UPEI is already taking sustainability into account in its development and operations:

- UPEI is an active participant in the Charlottetown District Energy System.
- UPEI has active sustainability and energy efficiency committees.
- UPEI has hired a Sustainability Coordinator who is already championing sustainability on campus.
- UPEI has committed to an energy efficiency standard exceeding the National Building Code by 25 percent.
- UPEI is completing a buildings system retrofit project to reduce energy consumption in partnership with Natural Resources Canada.
- UPEI participates actively in the island-wide waste management program aiming at separating waste resources at the point of collection.
- UPEI is an active participant in the launch of Charlottetown’s new transit system.

6.4 A Comprehensive Approach

For the implementation of sustainable guidelines to be effective, a comprehensive, systematic and strategic approach must be pursued. This means that every process and activity on campus is reviewed for its environmental impact, taking into account social and economic implications. The following components are suggested as part of this approach:

6.4.1 A Bottom-Up Approach

The vision of a more sustainable campus is everyone's job. While champions are needed at the senior level of UPEI's administration, everyone on campus should be involved in carrying out this vision. A number of methodologies have been developed to assist organizations in this regard. One is 'The Natural Step', an approach originally developed in Sweden for municipal governments. In 'The Natural Step', a 'bottom-up' approach is pursued: instead of change being imposed from the top, sustainability becomes everyone's business. Workshops are conducted in every department to ensure that each employee is made aware of the importance of sustainability and empowered to contribute solutions and implement sustainable practices on the job. Targets and responsibilities are established at the department level.

The 'Bottom-Up' approach must be complemented with a 'Top-Down' approach whereby senior management provides the leadership and initiative to empower the organization to change.

6.4.2 Lifecycle Costing

An important step in the implementation of sustainability is the consideration of lifecycle costs: the added cost of acquisition, maintenance, replacement and operation over the lifetime of an object. The relevance of lifecycle costing to sustainability stems from the role of energy in the operation of buildings, machinery and vehicles. Since a premium is often attached to energy efficiency, it is important to consider lifecycle costs and coordinate capital and operational budgets. In parallel, discussions can be held with funding organizations and governments to explain the benefit of lifecycle costing, especially as part of fundraising efforts for new buildings.

In addition to lifecycle costing, external costs and benefits must be recognized as much as possible. This means that costs and benefits not normally accounted for, either environmental or financial, are taken into account in decision-making.

6.4.3 Sustainability and Incentive Systems

The implementation of the most thoughtful policies will only succeed with a solid process in place to ensure that job descriptions and incentives clearly specify the need for sustainable practices. In addition, budgets must be revised to accommodate lifecycle costing and changes in labour requirements. For example, as drought-tolerant grasses and ground covers limit the need for lawn mowing and irrigation, the effective costs or savings of these changes should be calculated for the budgeting process.

6.4.4 Sustainability in the Curriculum

By weaving sustainability into its curriculum, UPEI can establish itself as a leader in environmental education and research, in addition to sparking new ideas on how to constantly improve its own practices. Because sustainability has social, environmental and economic dimensions, every discipline presents opportunities to include sustainability in its curriculum. Students can be provided with opportunities to work on long-term study projects that involve sustainability, and research programs can be established to further advance the state of knowledge in environmental science and education, with opportunities for partnerships with internal and external entities involved in the day-to-day implementation of sustainability.

The Sustainability program can also constitute a source of on-campus employment for students, for example in recycling, composting, manual grounds maintenance and training others in sustainability practices.

Finally, a sustainable campus provides opportunities for outreach programs such as summer camps and community outreach programs.

6.4.5 A Proactive Approach

Because of the relatively recent awareness and emphasis on sustainability in PEI and the small size of the Island market, some products and services available elsewhere may not be available or cost more, such as organic produce, 'green' construction materials or the recycling of electronics. UPEI should pursue a proactive approach in collaboration with allied institutions such as Holland College, school boards, government agencies and private firms to encourage the growth of a market for sustainable products, services and practices on the Island, a prime example being public transit.



Gravel pathways are attractive and permeable. This Montreal example shows that they are adapted to our climate as well.



This constructed wetland filters runoff from a parking lot.

6.4.6 A Supportive Environment

The Sustainability Office is responsible for coordinating the participation of departments and administrative units: by facilitating workshops and providing encouragement, education and resources. The Office could also act as a consultant to assist departments in their efforts, perform research as needed and suggest alternatives to current practices. This includes identifying alternative suppliers and products, evaluating competing solutions and researching the impact of alternatives. For example, the Office could recommend the use of power-saving bulbs, but point out their mercury content and coordinate their disposal. An important function is to ‘train the trainer’, which involves identifying and training departmental sustainability coordinators who can propagate information and centralize questions. The Office can also facilitate partnerships with suppliers and other public and private institutions on the Island to pool purchasing power and coordinate requirements.

To facilitate the work of the Sustainability Office and the implementation of Sustainability on campus in general, adequate financial, human and administrative support is necessary. Some of the savings resulting from the implementation of some recommendations, such as improved energy efficiency, should be earmarked for other sustainable initiatives.

As mentioned earlier, the continuous support of senior management is crucial to ensure the success of the Sustainability Office and sustainability initiatives in general over the long term.

6.4.7 Monitoring Systems

Monitoring systems are needed to track progress over time against pre-established targets and to identify areas in which further progress is needed. Over time, partnerships can be established with compatible institutions to agree on a common measuring system to allow benchmarking. Each year, a report should be produced to publicize UPEI’s progress, inspire other organizations and encourage further efforts. Senior management, or an ad-hoc committee composed of various university stakeholders, should be accountable for progress.

6.5 Campus Sustainability Initiatives

The following section provides an overview of areas where sustainable practices should be incorporated into the design and operation of the campus and its functions.

6.5.1 Buildings

Through their construction, maintenance and operation, buildings have a significant impact on the environment.

The LEED (Leadership in Energy and Environmental Design) model is the most popular emerging standard for the design and construction of buildings. LEED can help minimize the building’s impact on the site and reduce energy and water consumption during construction and throughout the building’s useful life. LEED also emphasizes human health through a healthy indoor environment. LEED is composed of the following elements, each contributing points towards an overall rating:

- Sustainable Sites – before considering new construction, existing buildings should be renovated or converted. New construction should only take place on easily serviceable and accessible sites with minimum disturbance and displacement of habitats and agricultural uses.
- Water Efficiency – water use and wastewater should be reduced, both within the building and the surrounding landscape.
- Energy and Atmosphere – energy use should be minimized, renewable energy is preferred and ozone-depleting chemicals must be avoided.
- Materials and Resources – the quantity of materials used in construction should be minimized (e.g. by reusing existing structures), materials with minimal impact should be selected (e.g. renewable), and construction waste should be minimized, recycled or adequately managed.
- Indoor Environmental Quality – buildings should be designed to foster a healthy environment through improved air quality, reduced indoor air pollutants, enhanced comfort and access to the outdoors through daylight, views, and operable windows.
- Innovation and design – LEED encourages innovation and provides additional points for solutions not otherwise comprised within the LEED rating system.

6.5.2 Open Space

There is significant scope to improve the environmental quality of UPEI’s open spaces: by the selection of plant species that require less maintenance, and by integrating species and planting patterns typical to PEI’s native Acadian forest, where appropriate. Additional details can be found in Chapter 4.

6.5.3 Procurement

Procurement covers the sourcing of all products and services on campus. By actively managing its procurement policies, UPEI can obtain products and services that can result in a cleaner environment at UPEI and where they are produced. The following are some principles that should be followed in the selection of products and services. Please note that they can at times appear to contradict one another. The net benefit must therefore be determined:

- Repair and reuse before purchasing. Also explore, exchange or barter.
- Select products and services that are produced locally, employ local people and help perpetuate local culture and practices. An important example in an agricultural community such as PEI is the sourcing of food on campus. Universities across North America have struck agreements with local farmers to ensure that a stable supply of healthy and locally produced food is provided to the University. The reliance on off-island processed food should be dramatically reduced.
- When products from developing countries must be purchased, choose products that have been produced with improved social practices (e.g. fair trade coffee).
- Determine the lifecycle costs of options and opt for durable goods.
- Select renewable materials instead of man-made alternatives, where possible.

6.5.4 Processes

Switching to more innocuous materials and tools will not in itself ensure sustainability. New processes developed specifically to achieve sustainability must be adopted as well. Examples include:

- Lower thermostats in the winter and educate users with the reason for doing so. Temperature can be as low as 19 degrees. In the summer, thermostats can be raised as high as 26 degrees.
- Minimize the use of chemicals that have impacts on the local environment and human health, for example Volatile Organic Compounds.
- Explore economizing processes, such as duplexers in printers that allow double-sided printing, or the use of a printer tray that contains scrap paper.

- Select plants that require less watering, fertilizing and pest control. Review mowing schedules and times.
- Discourage idling on campus.
- Encourage barter and 'garage sales' in residences to minimize disposal.

6.5.5 Water Efficiency

Water may seem plentiful on the Island, but there is no reason for wasting it. Clean water requires energy to produce and transport, while wastewater must be treated at great expense. Hot water requires energy to produce. Some opportunities include:

- Low-flow faucets and showerheads in existing and new buildings;
- Low-flow toilets in existing and new buildings;
- An effective process to report and repair leaks as they occur;
- Selection of plants that require less watering;
- Water-saving watering practices;
- Rainwater collection;
- Runoff reduction through permeable surfaces, green roofs and filtration swales or ponds.

6.5.6 Energy Efficiency

Long before many institutions, energy efficiency has received significant attention at UPEI and a committee was recently formed to further encourage energy efficiency. Key areas of intervention include:

- New buildings: the selection of energy efficient boilers, HVAC systems and power-saving bulbs, as well as opportunities for daylighting and deciduous trees to reduce cooling loads in the summer.
- Existing buildings: the adoption of a rolling envelope to fast-track retrofits (an initial 'loan' is made to fund the improvements and is paid back with the savings)
- Machinery: the replacement of machines with energy efficient models.
- Adoption of new practices: the use of the 'sleep' function on computers at night.



Why is a lawn that has been fed fertilizer and pesticide, and mown at great expense of money and fuel, perceived as more attractive than a natural meadow?



Cycling still needs encouragement on campus.

- Outdoor lighting: the selection of energy efficient light fixtures that are downcast to minimize light pollution, in conjunction with a fine-tuned timing system to ensure that lights are only on when it is dark.
- Vehicle and machine use on campus: the adoption of new practices to minimize the use of machinery on campus. For example, leaves and grass should be raked when the volume is small and dry.
- Transportation: the inclusion of private transportation to and from the campus in UPEI's energy consumption picture to encourage alternatives, such as walking, transit, carpooling and telecommuting. Proactively encourage video-conferencing as an alternative to air travel.
- Electricity: the sourcing of UPEI's electricity from renewable sources, including wind and methane from landfills. In addition, UPEI is known locally as the "Windy Campus" in the wintertime. This drawback could be turned into a sustainable advantage with the implementation of a large windmill. A windmill could provide at least the base load of the UPEI campus electricity needs and as the power used has a retail value, the project would have a reasonable return on equity. The windmill has the potential as a UPEI landmark and the strong potential for a fundraising campaign. If combined with a diesel electric power plant, this system has the potential to be designed to provide uninterrupted power for all campus needs.

6.5.7 Parking and Transportation

UPEI operates a very small fleet of vehicles and can easily ensure that energy-efficient models are selected, that they are used conservatively, and fine-tuned for optimal operation. However, a significant amount of energy is consumed by campus users commuting to and from the campus, amounting to about 12% of the energy spent by UPEI in electricity, hot water for heating, oil and propane¹. UPEI should acknowledge its responsibility in transportation-related energy use, and adopt a program to encourage alternatives to establish reduction targets.

Managing access to the campus is strongly related to the supply of parking. The encouragement of other modes of transportation can eliminate the need for new parking lots, thus resulting in the following benefits:

- Reduced paving of open space or need to construct a concrete parking garage;

- Reduced heat island effect in the summer defined as the localized increase in temperature due to absorption of solar energy in flat paving surfaces;
- Increased opportunity to plant trees that capture carbon dioxide and enhance the appearance of the campus;
- Reduced use of asphalt;
- Reduced power use for lighting;
- Reduced use of salt and melters;
- Reduced plowing.

Conversely, the University can encourage alternative modes of transportation by restricting parking supply.

Additional information on transportation alternatives can be found in Chapter 5 – Transportation.

6.5.9 Waste Reduction and Management

PEI, with its Island Waste Management Corporation (IWMC), is at the forefront of waste management in Canada, and UPEI forms an integral part of that system. However, UPEI can make progress in the following areas:

- Through the procurement process, favour goods with minimal packaging. Work with local suppliers to reduce the amount of packaging used.
- Reduce the packaging used for food services on campus.
- Strengthen education efforts of off-island students to increase compliance.
- Explore opportunities for on-campus composting and use (e.g. in grounds maintenance). It is possible to start small, for example with coffee grounds.
- Collaborate with IWMC to address recycling and disposal of computer and electronic equipment.

¹45,149,332,876 BTU for heating/power, 17,693,206,326 BTU for transportation, assuming 5.5 km commute, single occupancy for staff, 1.25 for students, 100% auto use, save for 600 FT students (who can be assumed to walk to UPEI). Staff and faculty assumed to drive every day except week-ends, holidays and sick days; students 4 days for 26 weeks.

Implementation



7.1 Phasing

The implementation of the Campus Plan is of course subject to a host of external factors which cannot be predicted. While the Plan is intended to provide a flexible framework for the evolution of the Campus, a possible forecast for the sequence of implementation is provided in the following.



Short Range Plan shows existing campus buildings in white, and proposed buildings in orange.

Medium Range Plan

- AVC Addition S-5
- KC Irving Addition C-9
- Residence Buildings: S-1, S-2, S-3, S-4
- New Chaplaincy Centre C-5
- Small academic Building C-4
- Research Building C-15
- Classroom Buildings C-2, C-3
- S-7 Site



Medium Range Plan shows existing campus buildings in white, and proposed buildings in orange.

Long Range Plan

- Library Expansion C-6, C-7
- Research Buildings C-16, C-17, C-18, C-19
- S-6
- North Campus Development
- Parking Structure



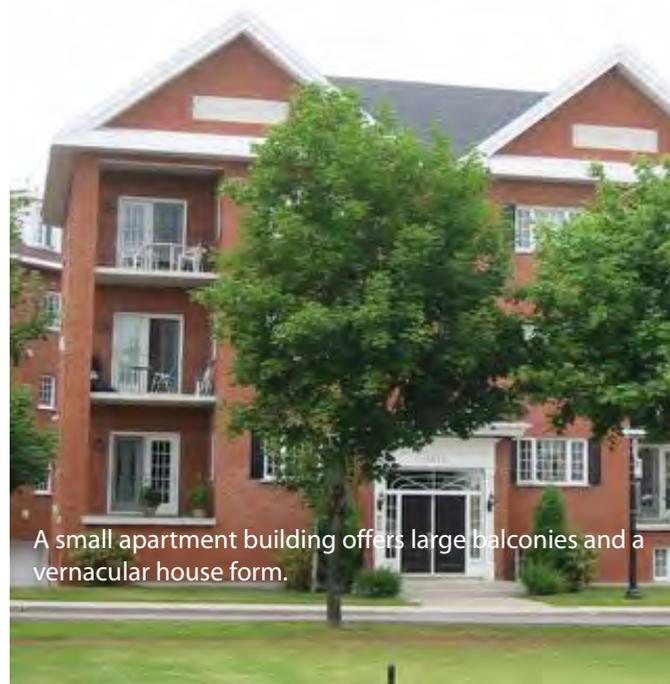
Long Range Plan shows existing campus buildings in white, and proposed buildings in orange.



The Village on the Arboretum at the University of Guelph has encountered enormous success. It combines bungalows with apartments, and offers a range of activities to residents.



Two apartment buildings share an amenity centre. Note the choice of quality materials used.



A small apartment building offers large balconies and a vernacular house form.

7.2 Residential Opportunities

Many universities in the United States and Canada have built, or joint-ventured to build seniors communities on their land. Around fifty such communities have been built in the United States, and thirty more are planned. In Canada, the best known example is that of the University of Guelph, with its “Village by the Arboretum”.

The combination of surplus land resources, an aging population and a successful Seniors’ College have prompted the exploration of this concept for UPEI. Such a community could be built on the North Campus, or on lands adjacent to the campus in collaboration with their owners.

7.2.1 Rationale

On-campus seniors housing creates a year-round presence of community-conscious individuals who can form a loyal base for on-campus events and continuing education programs. With the CARI Facility on campus and an extensive and attractive open space system, combined with the University’s proximity to a wide variety of retail and service uses, the North Campus could be an ideal location for a seniors’ community. The leasehold development of these lands could provide UPEI with a reliable source of revenue for the long-term.

In PEI and Canada, the aging of the active and highly educated baby boomer cohort will result in a large number of new seniors looking for a dynamic and intellectually stimulating retirement. At UPEI, the popularity of the Seniors’ College is a good predictor of the potential interest for such a concept.

7.2.2 Agreements

There is a range of agreements that can be drafted between universities and residents or developers. Usually, the University partners with an experienced for-profit or non-profit, denominational or non-denominational developer who designs and markets the residences. The University retains ownership of the land while residents sign transmittable life leases and pay fees for the land lease, maintenance and other services.

7.2.3 Involvement

The University's involvement can vary greatly from merely providing the land to considering the Seniors' Community as a fully integrated residential component of the University. Many institutions provide full access to sports facilities, libraries, seminars, lectures and other activities as a selling point. Tailored courses that can be fully or partially organized and taught by residents of the seniors community are encouraged. Some institutions insist that participation in campus activities is the community's raison d'être and establish a minimum level of mandatory participation.

7.2.4 Associations

A number of potential associations exist between a potential seniors' community and existing UPEI entities:

- CARI – use of facilities, courses
- Nursing – patient care
- Health Sciences, institute for aging – patient care and classes
- Arts – classes and entertainment programme
- Veterinary Medicine – pet care, pet sitting
- Continuing Education – lifelong learning
- Nutrition – meal design and classes

An important selling point is access to medical services on campus.

7.2.5 Form and Appearance

The appearance and design of seniors' communities on campus varies greatly depending on setting and geographic location. In general, however, a combination of low-rise cottages and medium-rise apartments provides a range of lifestyle and level of care. Hassle-free grounds maintenance is an important selling point, as is security.

Consideration may also be given to mixed-age rental housing types such as townhouses that would provide seniors units on the ground level and two-storey apartments above.



These attractively proportioned residences at the University of Maryland frame a courtyard. Pathways connect these buildings with the rest of the campus. Parking is concealed behind buildings.



These bungalows are part of UBC's award-winning residential community.



These UBC apartment buildings blend density with intimacy thanks to vertical and horizontal façade articulations and abundant planting.



UBC apartments at street level.



This Waterloo, ON seniors community offers at-grade units with gardens in its apartment buildings.

7.3 *Plan review*

As the official campus plan for UPEI, this Campus Plan should be the regulatory document that guides the University's land use decisions. As such, it should be adopted by the Board of Governors as a policy document designed to facilitate change and growth management on the UPEI campus over the coming decades. The Campus Plan is presented as a long-term vision and direction for campus development. Adherence to this vision will ensure that a sustainable, compact, vibrant campus develops with respect for dynamic and meaningful open spaces. At the same time, while this plan presents a vision, it must continue to respond to evolving realities and, possibly, changing priorities.

A biennial Plan Review is an effective way to ensure that the intent and vision of the Campus Plan are maintained over the long-term, and yet integrated with development realities. As a mechanism to conduct the Plan Review, the office of the Vice-President Finance and Facilities or equivalent, should issue a Report Card every other year that evaluates on-going development activity on campus in accordance with a predetermined series of indicators. As an outcome of this Report Card, elaborations or amendments may be proposed to the Campus Plan so that it remains a relevant, regulatory document. This approach will be especially valuable over the next ten years as the Campus continues to experience significant growth pressures on already heavily solicited facilities. As well, the realities of fundraising and government funding are sure to result in unanticipated outcomes which will require adjustments to forecasts and outstanding needs.

7.4 *Concluding Remarks*

The UPEI Campus Master Plan is intended to reinforce the mission of the University, provide a framework for improvements to the physical fabric of the Campus, and provide a coordinated approach to the growth of the campus as it evolves over time. In this way, the University's activities can both be supported and enriched by its setting.

