North Campus Open Space Plan

JUNE 2014

UNIVERSITY OF ALBERTA

UNIVERSITY OF ALBERTA

O2 PLANNING + DESIGN

PREPARED BY

UNIVERSITY OF ALBERTA

PREPARED FOR

University of Alberta

North Campus Open Space Plan

JUNE 2014

Executive Summary

The University of Alberta North Campus has been a mainstay in the Edmonton and Alberta landscape since its inception in 1908. Through its evolution over the course of the 20th century and now into the 21st century, the University has grown dramatically both in terms of its size, but also in terms of its presence and reputation as one of the world's top public universities. Critical to the success of the University is its physical landscape and location on the North Campus, which plays a key role in attracting new students, faculty, staff, and researchers. The character of the North Campus landscape is a major part of the experience of attending the University. To support this, it is important that the character and sense of place of the North Campus is retained and enhanced. The preparation of the North Campus Open Space Plan was identified as an appropriate means of supporting the existing open space network, and outlining opportunities for its future enhancement.

The Open Space Plan for the North Campus is intended to identify the existing open space assets on the campus, and provide direction for ensuring these assets are properly integrated into new development, enhanced, and preserved in a manner that responds to sustainable practices.

The Plan will provide opportunities for the open space system to continue to act as the connective tissue for the overall North Campus, by balancing increased density and ongoing development, improving livability and sustainability, and reinforcing a sense of community – both for the internal University community, but also for the surrounding neighbourhoods and wider city of Edmonton. The range of spaces and linkages on the campus will play a critical role in supporting academic activities and goals, and will help to create a public realm that contributes to campus life, activities, rituals and celebrations that are shared by current students and staff and alumni alike.

To achieve these goals, tools are provided in the Plan to support physical activity, enhance the campus' character and beauty, support universal accessibility, foster a sense of safety and security, enable efficient wayfinding, and promote environmental stewardship. Section 3 of the Plan addresses the campus as a mix of distinct open space Precincts that possess certain characteristics, and outlines the specific issues and opportunities for each. The broader campus landscape concepts and strategic opportunities are outlined in Section 4, and are based on three overarching aspects: landmarks, gateways and edges; major districts, open spaces and nodes; and connections and pathways. A number of sustainable landscape strategies are presented in Section 5 that provide direction on site planning and design, landscape materials, vegetation renewal, safety and security, operations and maintenance, and water management. Section 6 of the Plan outlines implementation strategies and considerations to ensure that the Open Space Plan is the key document guiding the ongoing enhancement of the open space landscape of the North Campus.

Recognizing that the North Campus landscape will continue to evolve over time, and will need to respond to new development and future users, the Plan is designed to be flexible in its approach. The conceptual opportunities and strategies outlined herein will support the articulation, preservation, development and integration of open spaces and linkages in a coherent and consistent manner that helps to create an outstanding campus landscape, and supports the University's broader goals.

The historic architecture of the campus offers a distinctive backdrop to the University landscape.

The campus landscape is an integral aspect of the uniqueness and character of the North Campus. Source: Peak Experience imagery.

Table of Contents

1 INTRODUCTION 8
1.1. Purpose of the North Campus Open Space Plan 10
1.2. Plan Structure and Format 12
1.3. A Vision for the North Campus Landscape 16
1.4. Guiding Principles 18
1.4.1. Safe, Inclusive and Accessible to All 18
1.4.2. A Sense of Place and History 18
1.4.3. A Learning Landscape 19
1.4.4. A Campus Connected to the City 19
1.4.5. A Campus Connected to the 20
Surrounding Communities 20
1.4.6. A Sustainable Landscape 20
1.4.7. Winter Climate and Night 21

2 THE CAMPUS CONTEXT 22
2.1. Biophysical Context 24
2.2. History of the University of Alberta 24
2.2.1. Original Vision of the Campus 26
2.2.2. Evolution of the Campus 30
2.3. The Campus in the City and Community 32
2.4. Planning Context - Relevant University Plans and Policies 38
2.4.1. Dare To Discover 38
2.4.2. Dare To Deliver – Academic Plan 2011 – 2015 38
2.4.3. 2013 Comprehensive Institutional Plan 39
2.4.4. Long Range Development Plan 40
2.4.5. 2012 – 2016 Sustainability Plan 45
2.4.6. North Campus Sector Plans 46
2.4.7. Other University Policies 48

3 THE CAMPUS LANDSCAPE - ISSUES AND OPPORTUNITIES 50
3.1. Configuration and Character 52
3.2. Circulation 54
3.2.1. Pedestrian and Bicycle Circulation 54
3.2.2. Vehicle Circulation and Parking 57
3.2.3. Building Servicing 59
3.3. Vegetation 60
3.4. Campus-Wide Issues and Opportunities 70
3.5. Campus Precincts – Issues and Opportunities 71
3.5.1. River Valley Precinct 72
3.5.2. West Academic Precinct 74
3.5.3. Recreation + Wellness Precinct 76
3.5.4. Central Quad + Central 78
Academic Precinct
3.5.5. East Academic Precinct 80
3.5.6. East Campus Village Precinct 82
3.5.7. Lister + Central Services Precinct 84
3.5.8. Health Sciences Precinct 86

4 THE FUTURE CAMPUS LANDSCAPE 88
4.1. Overall Concept and Strategic Interventions 92
4.1.1. Landmarks, Gateways and Edges 94
4.1.1.1. Gateway Plaza 96
4.1.1.2. River Valley Promenade 98
4.1.1.3 West Campus Promenade 100
4.1.1.4 87 Avenue Corridor 102
4.1.2. Major Districts, Open Spaces and Nodes 104
4.1.2.1. Transit Hub / Prairie Parkland Plaza 108
4.1.2.2. Outdoor Amphitheatre 110
4.1.2.3. Main Quad 112
4.1.2.4. Celebration Plaza 114
4.1.2.5. Open-Air Market 116
4.1.3. Connections and Pathways 118
4.1.3.1. 114 Street 122
4.1.3.2. 112 Street 124
4.1.3.3. Fine Arts / Law Plaza 126
4.1.3.4. 89 Avenue Promenade 128
4.1.3.5. Cafe Promenade 130
4.1.3.6. Main Quad Linkage 132
4.1.4. Seasonality and Around-the-Clock 134
Use of the Landscape

5 SUSTAINABLE LANDSCAPE STRATEGIES 136
5.1. Building Placement, Planning and Design 140
5.2. Hard Landscape Materials and Resources 141
5.3. Vegetation Renewal and Restoration 142
5.3.1. Urban Forest Management and Vegetation Enhancement 143
5.4. Design for Safety and Security 144
5.5 Operations and Maintenance 145
5.6 Water Management 146
5.6.1 Stormwater Management and Low Impact Design 147
5.6.2 Irrigation and Water Use 148

6 PLAN IMPLEMENTATION 150
6.1. Integration with the Long Range Development Plan and Sector Plans 153
6.2. Infrastructure Considerations 154
6.3. Investment in the Landscape 155
6.4. Governance Considerations 156
6.5 Integration with Campus Development 157

APPENDICES
Appendix 1 Proposed Design Checklist 160
Appendix 2 Stakeholder Engagement 167
Appendix 3 Acknowledgements 176

List of Figures

Figure 1 University of Alberta campuses in Edmonton
Figure 2 North Campus planning Sectors
Figure 3 North Campus Circulation Network
Figure 4 Parking Facilities on North Campus
Figure 5 Service Vehicle Routes and Building Connections
Figure 6 North Campus Precincts
Figure 7 Issues and Opportunities for River Valley Precinct
Figure 8 Issues and Opportunities for West Academic Precinct
Figure 9 Issues and Opportunities for Recreation + Wellness Precinct
Figure 10 Issues and Opportunities for Central Quad/Central Academic Precinct
Figure 11 Issues and Opportunities for East Academic Precinct
Figure 12 Issues and Opportunities for East Campus Village Precinct
Figure 13 Issues and Opportunities for Lister + Central Services Precinct
Figure 14 Issues and Opportunities for Health Sciences Precinct
Figure 15 North Campus Strategic Concept
Figure 16 Overall Open Space Concept for North Campus
Figure 17 Landmarks, Gateways and Edges – Key Opportunities
Figure 18 Proposed Gateway Plaza – Plan View
Figure 19 Proposed Gateway Plaza – Rendered View
Figure 20 Proposed River Valley Promenade – Plan View
Figure 21 Proposed River Valley Promenade Section
Figure 22 Proposed West Campus Promenade – Plan View
Figure 23 Proposed West Campus Promenade Section
Figure 24 Proposed 87 Avenue Corridor – Plan View
Figure 25 Proposed 87 Avenue Corridor Section
Figure 26 Districts, Open Spaces and Nodes – Key Opportunities
Figure 27 Proposed Transit Hub/Prairie Parkland Plaza – Plan View
Figure 28 Proposed Transit Hub/Prairie Parkland Plaza – Rendered View
Figure 29 Proposed Outdoor Amphitheatre – Plan View
Figure 30 Proposed Improvements to Main Quad – Plan View
Figure 31 Proposed Celebration Plaza – Plan View
Figure 32 Proposed Celebration Plaza – Rendered View
Figure 33 Proposed Open-Air Market – Plan View
Figure 34 Proposed Open-Air Market – Rendered View
Figure 35 Connections and Pathways – Key Opportunities
Figure 36 Proposed 114 Street Corridor – Plan View
Figure 37 Proposed 114 Street Corridor Section
Figure 38 Proposed 112 Street Corridor – Plan View
Figure 39 Proposed 112 Street Corridor Section
Figure 40 Proposed Fine Arts/Law Plaza – Rendered View
Figure 41 Proposed Fine Arts/Law Plaza – Plan View
Figure 42 Proposed 89 Avenue Promenade – Plan View (Portion)
Figure 43 Proposed 89 Avenue Promenade Section
Figure 44 Proposed Café Promenade – Plan View
Figure 45 Proposed Café Promenade – Rendered View
Figure 46 Proposed Main Quad Linkage – Plan View

Introduction

Section
One

10 1.1. Purpose of the North Campus Open Space Plan
12 1.2. Plan Structure and Format
16 1.3. A Vision for the North Campus Landscape
18 1.4. Guiding Principles
18 1.4.1. Safe, Inclusive and Accessible to All
18 1.4.2. A Sense of Place and History
19 1.4.3. A Learning Landscape
19 1.4.4. A Campus Connected to the City
20 1.4.5. A Campus Connected to the Surrounding Communities
20 1.4.6. A Sustainable Landscape
21 1.4.7. Winter Climate and Night

1.1 Purpose of the North Campus Open Space Plan

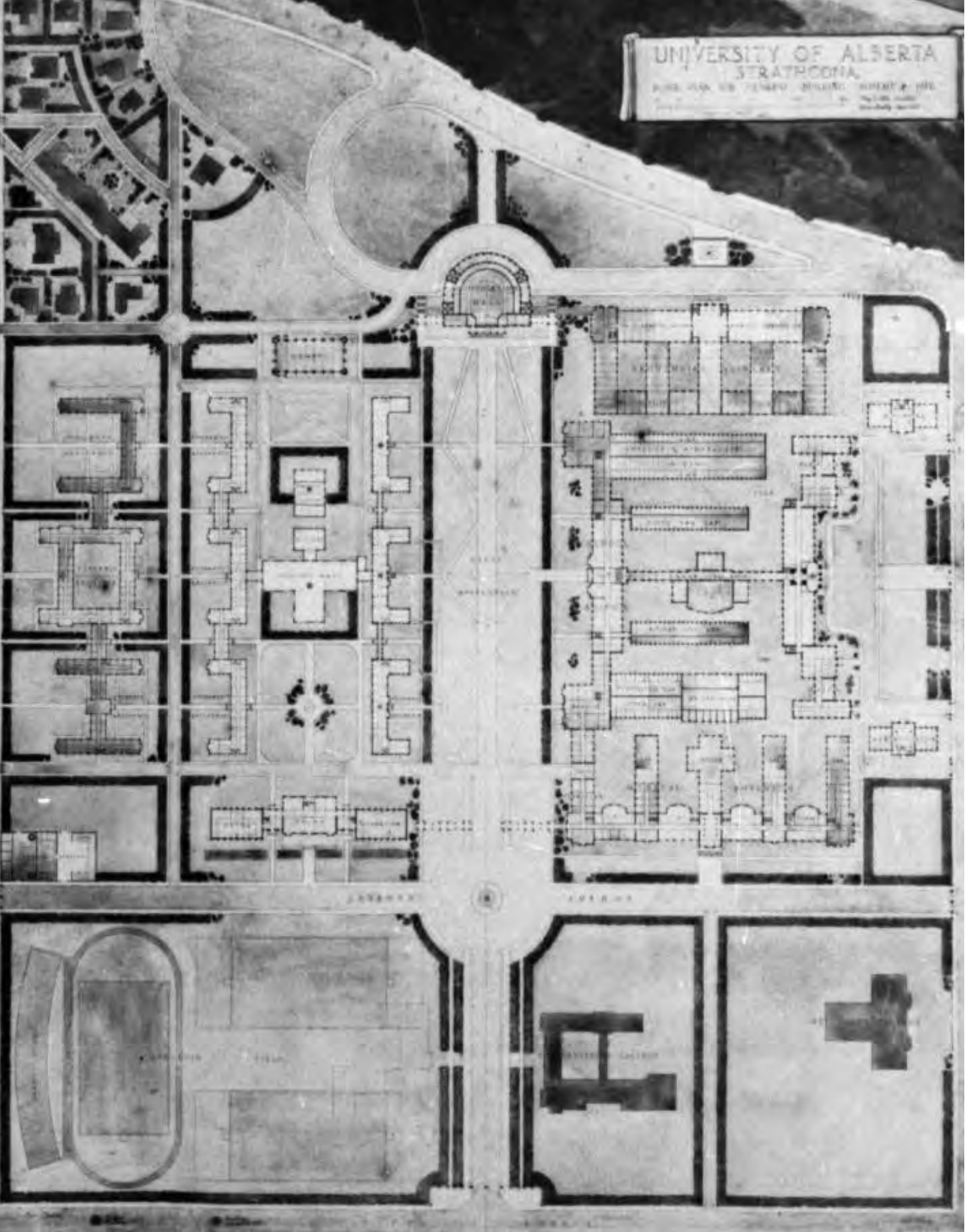
When the University of Alberta was established in 1908, its two founding fathers, Alexander Rutherford (Premier of Alberta at the time) and Henry Marshall Tory (the University's first President) were determined to create an institution that was forward-thinking, consistent with the enthusiasm of the new century.

The intent was to develop a university that from the start would be part of the mainstream of higher education in North America. The University would be non-denominational, it would be focused on teaching, women students would be granted access to all programs, and the institution would be in one location, with all faculties and departments comprehensively sharing a single site. The latter point would shape the development of the University's original campus (now referred to as North Campus) over its now 106-year history.

Today, despite the development of additional campuses in Edmonton (including South Campus, Campus Saint-Jean, and Enterprise Square), Augustana Campus in Camrose, the Devonian Botanic Garden, and other research stations, the North Campus still remains as the heart of the University. From the outset, design of the campus lands was a critical matter for Tory. The original 1912 Block Plan, designed by the Montreal architectural firm Nobbs and Hyde, envisioned a campus in the Beaux-Arts style, oriented around a great quadrangle. Open spaces to complement the architecture were a key element of the original plan, and many of these are still retained on the North Campus today.

As the University continues in its second century, a comprehensive vision for the open space network on the North Campus is needed. The North Campus Open Space Plan will establish this vision, and will assist the University in shaping the future of the North Campus, ensuring a balance between academic needs and the enhancement of the University of Alberta experience for students, faculty, and the overall community.

The historic 1915 Arts Building retains its sense of prominence and grandeur on the North Campus.



▲ Athabasca Hall, the University's first official building, opened in 1911.

◀ Original University of Alberta campus Block Plan, 1912.
Source: University of Alberta Archives, UAA-75-50.

1.2 Plan Structure and Format

The North Campus Open Space Plan will establish a broader vision for the open space network on the campus grounds, contributing to the academic experience for students, and enhancing the physical landscape overall.

SPECIFICALLY, THE OPEN SPACE PLAN WILL:

- Improve the public realm and its use as an academic resource as part of a learning landscape
- Enhance environmental and social sustainability
- Create a barrier-free environment through a cohesive and connected system of pathways and open spaces
- Promote the use, pride, and ownership of open space for the University and wider community
- Promote the principles of smart growth and sustainable development practices
- Celebrate and enhance the established character and feel of the campus grounds
- Reinforce the campus identity and experience for all users
- Foster a sense of community that promotes social, intellectual, and emotional well-being
- Develop a framework to assist in strategic decision-making that respects academic requirements, the existing campus landscape, and the goals and objectives of the University community
- Reinforce an appropriate balance between buildings and landscaping/open space development
- Outline wayfinding/addressing and public art as important campus elements

THE KEY OBJECTIVES OF THE PROJECT WERE TO CREATE A PLAN THAT WOULD:

- Support and promote the activities of the academic programs and represent the cultural diversity of the University community
- Be an innovative document that continues to provide a framework within which landscaping initiatives can take shape
- Integrate a vibrant natural landscape within an urban campus
- Conserve, protect, and enhance significant open spaces on campus that are viewed as key assets through accepted methods of conservation, including preservation, rehabilitation, restoration, reconstruction and adaptive re-use
- Introduce a framework to link the Open Space Plan with the University Long Range Development Plan and individual Sector Plans
- Anticipate and support honourific naming and addressing of the campus
- Adhere to values related to resource stewardship
- Continue to support the University's broader sustainability goals and objectives
- Provide an enhanced landscape through all four seasons, particularly the winter months when most students experience the campus

A central component of the plan development exercise was to engage with the University community to identify issues and opportunities – those that use and experience the campus on a daily basis offer the best source of ideas and perspective on what would make a better campus environment. Knowledge from these stakeholders was supplemented by the project team and through a best practices review.

Engagement activities were facilitated through a broadly-represented Advisory Committee, as well as through more direct Focus Group sessions with key University stakeholders. Interaction with the broader local community was also undertaken, respecting the close-knit nature of the University's relationship with surrounding neighbourhoods.

Input and advice from the stakeholder groups was sought at the issues and opportunities stage, as well as at the draft conceptual stage of the overall plan document. Regular reporting to the Advisory Committee was also undertaken to ensure the emerging plan direction was in keeping with the goals and objectives of the University.

▲ The mature tree canopy of the North Campus is a key feature of the landscape, in all seasons.

The Plan is structured around six major sections.

SECTION 1 INTRODUCTION

The Introduction outlines the purpose of the Plan and its structure and format, discusses the overarching Vision for the Plan, and identifies a set of Guiding Principles that provide direction for the ongoing evolution of the North Campus landscape over time.

SECTION 2 THE CAMPUS CONTEXT

The Campus Context section provides a biophysical and historical context of the University and considerations related to the North Campus' location in the broader city and the local community. A discussion of the direction provided by other University plans and policy documents is included.

SECTION 3 THE CAMPUS LANDSCAPE

The Campus Landscape – Issues and Opportunities section provides a detailed inventory and analysis of the current configuration, character, and landscape of the North Campus. Elements addressed evaluate the North Campus from a campus-wide perspective, and also a more detailed analysis at a character Precinct level, identifying a range of issues and opportunities for each area.

SECTION 4 THE FUTURE CAMPUS LANDSCAPE

The Future Campus Landscape section builds upon the issues and opportunities analysis in Section 3, and introduces an overall open space concept for the North Campus. Strategic interventions are proposed for various locations, grouped under three topic areas: Landmarks, Gateways, and Edges; Major Open Spaces, Districts, and Nodes; and Connections and Pathways.

SECTION 5 SUSTAINABLE LANDSCAPE STRATEGIES

The Sustainable Landscape Strategies section provides information on the key components that were addressed to develop the open space concept for the North Campus. Topics discussed include: Building Placement, Planning and Design; Hard Landscape Materials and Resources; Vegetation Renewal and Restoration; Design for Safety and Security; Operations and Maintenance; and Water Management.

SECTION 6 PLAN IMPLEMENTATION

The Plan Implementation section proposes an implementation program for the University to consider in undertaking specific initiatives from the Plan. Landscape projects are considered relative to the integration with the Long Range Development Plan and Sector Plans, infrastructure and governance considerations, and ongoing investment into the North Campus landscape.

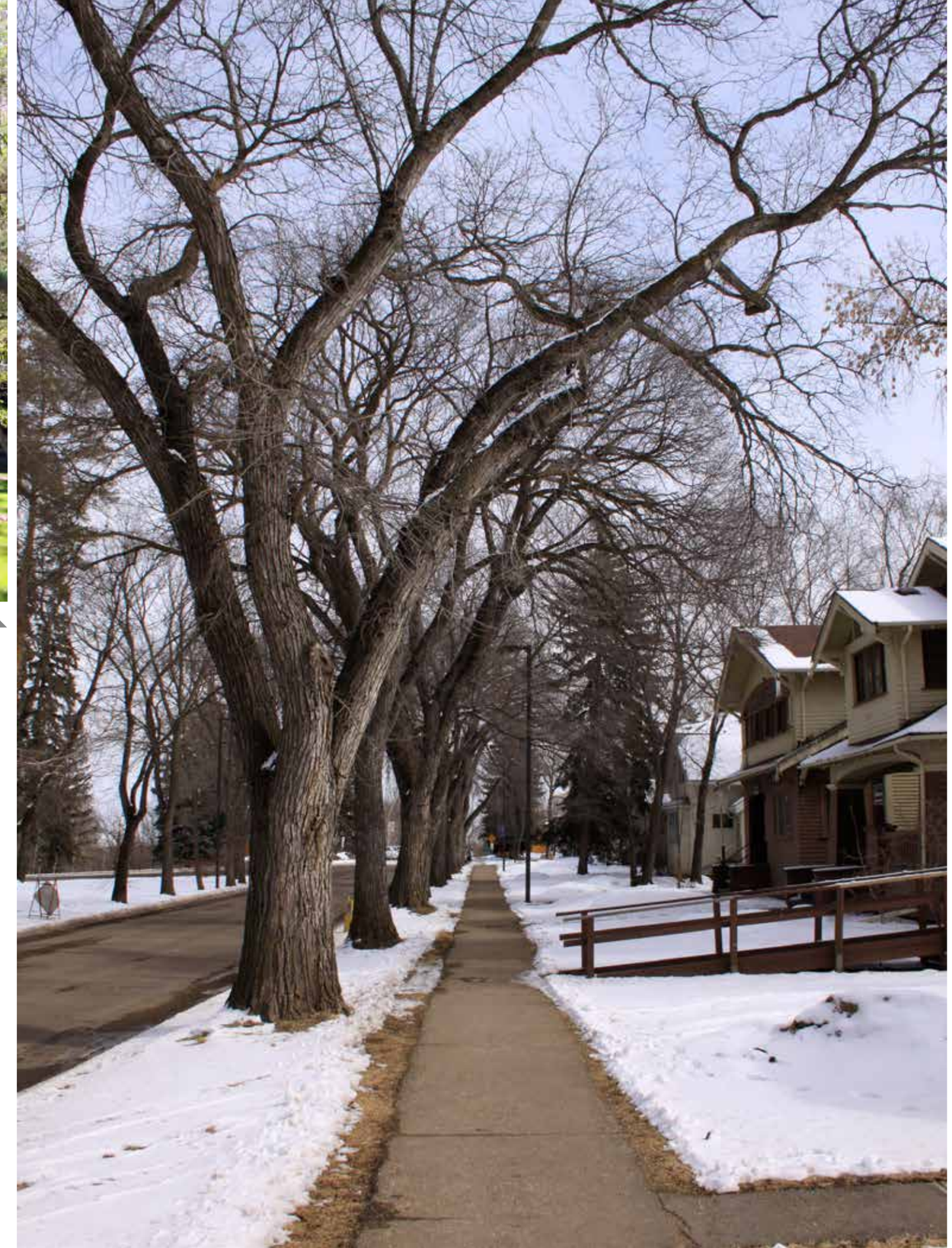
APPENDIX 1 PROPOSED DESIGN CHECKLIST

Provides a project design checklist that can be used by the University for a specific initiative.

APPENDIX 2 STAKEHOLDER ENGAGEMENT

Provides a summary of the stakeholder engagement undertaken as part of the project, and a summary of the feedback received.

The North Campus landscape offers many forms of open space for people to enjoy.



90 Avenue boulevard in East Campus Village.

1.3 A Vision for the North Campus Landscape

A university campus is often described as a cultural landscape; a place to walk, learn, live, and grow, it ties the many diverse functions together to create an image of the institution. The many different types of cultural and natural landscapes that are found on a campus create an integrative open space system, contributing to the overall spirit of place. A key understanding is that the open space system creates lasting impressions on those that experience it, one that when first seen can often determine a choice for a prospective student or faculty member, or general visitor to the campus. The sum of these many parts creates a campus that supports continued growth and change, yet also preserves, protects, and enhances the balance between buildings and the open space and public realm.

The Open Space Plan for North Campus will provide guidance and direction to enhance the character of the campus, will address inconsistent uses and distractions, and will outline strategies for accommodating change. In support of the University's values, mission, vision, and cornerstones, the broad Plan Vision Principles include:

- That the Plan be clearly aligned with the University's Vision and Mission
- That the Plan enriches the campus in a way that is reflective of its history and strives to enhance its international image
- That the Plan is interpretable and grows with the changing needs and priorities of the University
- That the Plan becomes a guide and reference to the University's decision-making process, is protected through the University policy framework, and relates to its Academic and strategic plans
- That the Plan will support the University's sustainability commitment and guiding principles

The campus landscape embraces its historic elements, such as the 1927 St. Joseph's College.

THE FOLLOWING VISION STATEMENT HAS BEEN PREPARED TO SUMMARIZE THE OVERALL PHILOSOPHY TOWARDS THE NORTH CAMPUS LANDSCAPE:

Uplifting the Whole People.

The North Campus will be a cohesive cultural and physical landscape that connects the University to the surrounding communities, enhances its intrinsic beauty, and provides a transformative experience for all. It will enrich a spirit of place, reinforce its existing character, and have a lasting impression. As a learning landscape, it will enhance the academic experience and attract exceptional talent. The landscape will be a model of sustainable development, promoting responsible management that meets current needs and positions the University to respond to future generations.

1.4 Guiding Principles

1.4.1 Safe, Inclusive and Universally-Accessible

The campus must be perceived as a safe, secure and inclusive environment for students, faculty/administration, visitors and the general public alike. It will be accessible to all ages and abilities, including those with hearing, sight and mobility challenges. The campus landscape will be inviting in all seasons, and a focus around which memories of the University are created. Interaction between campus users will be facilitated by legible and clear wayfinding cues that provide a connective network between major open space features, intimate spaces, pathways and linkages year-round and during both daytime and evening hours.

1.4.2 A Sense of Place and History

The North Campus represents a significant component of the historical evolution of the surrounding communities and the wider city. Elements of the original 1912 plan can still be seen on the campus today. This historical connection, coupled with the century-long evolution of the campus, provides much of the sense of place of the University. The spatial characteristics and quality of the campus, such as the mature tree canopy and the use of brick as a building material, are defined by the physical and social interaction between building architecture and open space features and plantings. The North Campus landscape will continue to inspire and engage, building on its historic sense of place.

▲ Graduate Student Residences in East Campus Village.

▲ Historic Assiniboia Hall (1913) retains its original connection to the Main Quad, even a century later.

1.4.3 A Learning Landscape

The North Campus landscape features prominently in the transformational experience of those attending, working on and visiting the site. The landscape can support a high quality environment for experiential learning by supporting the curriculum and research activities. Features of the landscape will be designed to respond to the wide range of users and experiences the campus provides, including education and research, socialization, artistic opportunities, recreation and celebration.

1.4.4 A Campus Connected to the City

The historical development and growth of the University has always been closely tied to that of modern-day Edmonton. Whether they hail from Edmonton, elsewhere in Alberta or beyond, countless thousands of graduates have experienced life at the University as part of the city. As a globally-recognized academic institution in a dynamic urban centre, the role of the North Campus landscape in the development of Edmonton will be highlighted.

▲ The campus landscape provides many opportunities to support academic programs.

▲ The North Campus has been an integral part of the Edmonton landscape since its founding in 1908. Source: Peak Experience Imagery.

1.4.5 A Campus Connected to the Surrounding Communities

If the University has been closely tied to the growth of Edmonton, the local communities in proximity to the campus have only more directly experienced that connection. Garneau, McKernan, Belgravia and Windsor Park all share stories and an intimate association with the University, and not necessarily always positive. Recognizing that the campus is intertwined with its local neighbours, the landscape will reflect the values of these communities, and will support and welcome those living and working within them to experience and enjoy its features.

1.4.6 A Sustainable Landscape

Supporting the broader sustainability initiatives of the University, the North Campus will be a model of innovative and sustainable urban landscape design, addressing components ranging from the provision of biodiversity and cultural enjoyment to water and vegetation management and climate mitigation. The campus landscape will rejuvenate the air, land and water as well as the spirit, while responding to economic and operational responsibilities.

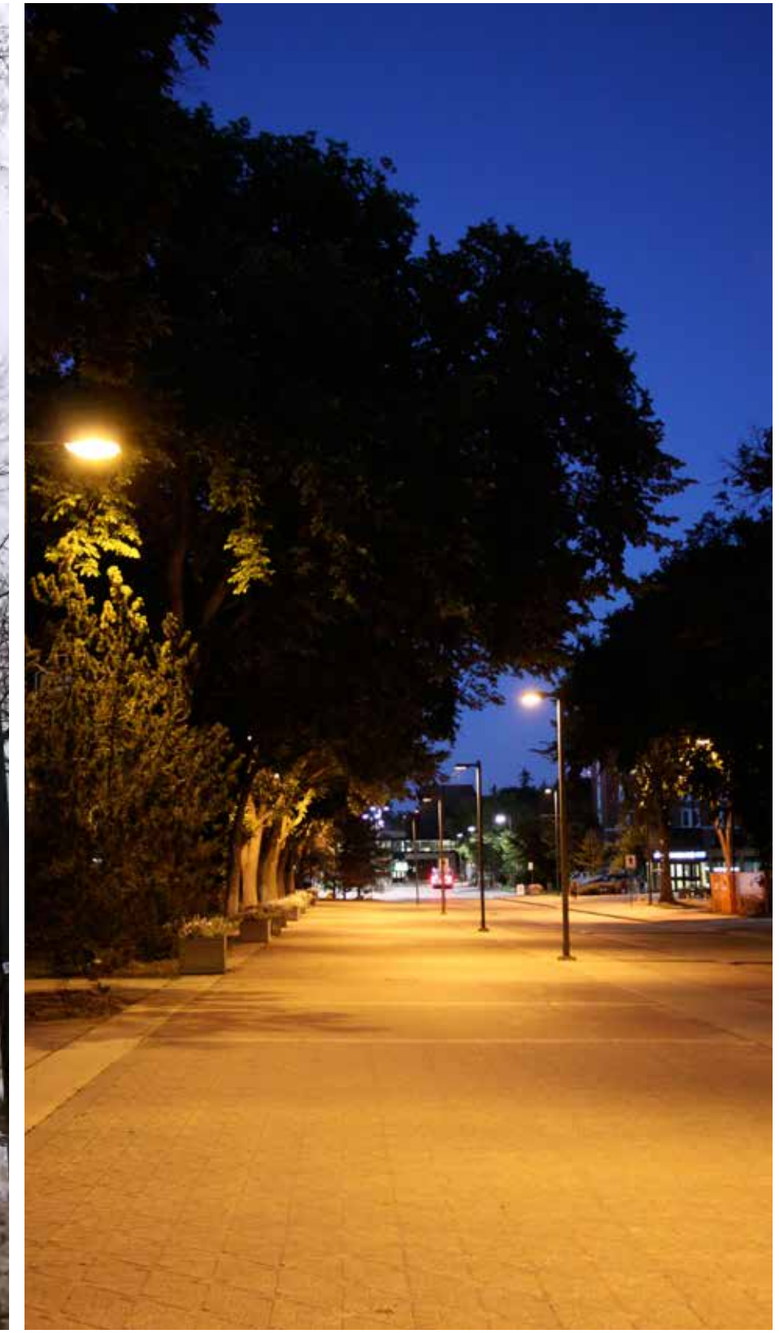
▲ New graduate student residences on 110 Street in East Campus Village respect local neighbourhood character.

▲ The use of native vegetation for landscaping contributes to a sustainable approach to campus development.

1.4.7 Winter Climate and Night

While the North Campus provides a high-quality and inviting landscape in the spring, summer and fall months, the majority of people experience the campus in the winter months, when cold temperatures, snow, and short days/long nights can be challenging. The open space system will strive to encourage activity on the campus throughout the year and provide a pleasing and safe environment in both day and night.

The open space network must respond to the needs of campus users throughout the year.



How people experience the campus at night is a critical consideration for design and planning.

The Campus Context

Section
Two

24 2.1. Biophysical Context
24 2.2. History of the University of Alberta
26 2.2.1. Original Vision of the Campus
30 2.2.2. Evolution of the Campus
32 2.3. The Campus in the City and Community
38 2.4. Planning Context - Relevant University Plans and Policies
38 2.4.1. Dare To Discover
38 2.4.2. Dare To Deliver – Academic Plan 2011 – 2015
39 2.4.3. 2013 Comprehensive Institutional Plan
40 2.4.4. Long Range Development Plan
45 2.4.5. 2012 – 2016 Sustainability Plan
46 2.4.6. North Campus Sector Plans
48 2.4.7. Other University Policies

2.1 Biophysical Context

The city of Edmonton is located within the Central Parkland Ecoregion, a subregion of the Parkland Natural Region. The Parkland Natural Region comprises 9% of Alberta's land, with the Central Parkland Ecoregion comprising 88% of this. The Central Parkland Ecoregion is highly populated, wholly or partly encompassing three of Alberta's largest cities, Edmonton, Calgary and Red Deer, with the majority of land used for agricultural purposes.

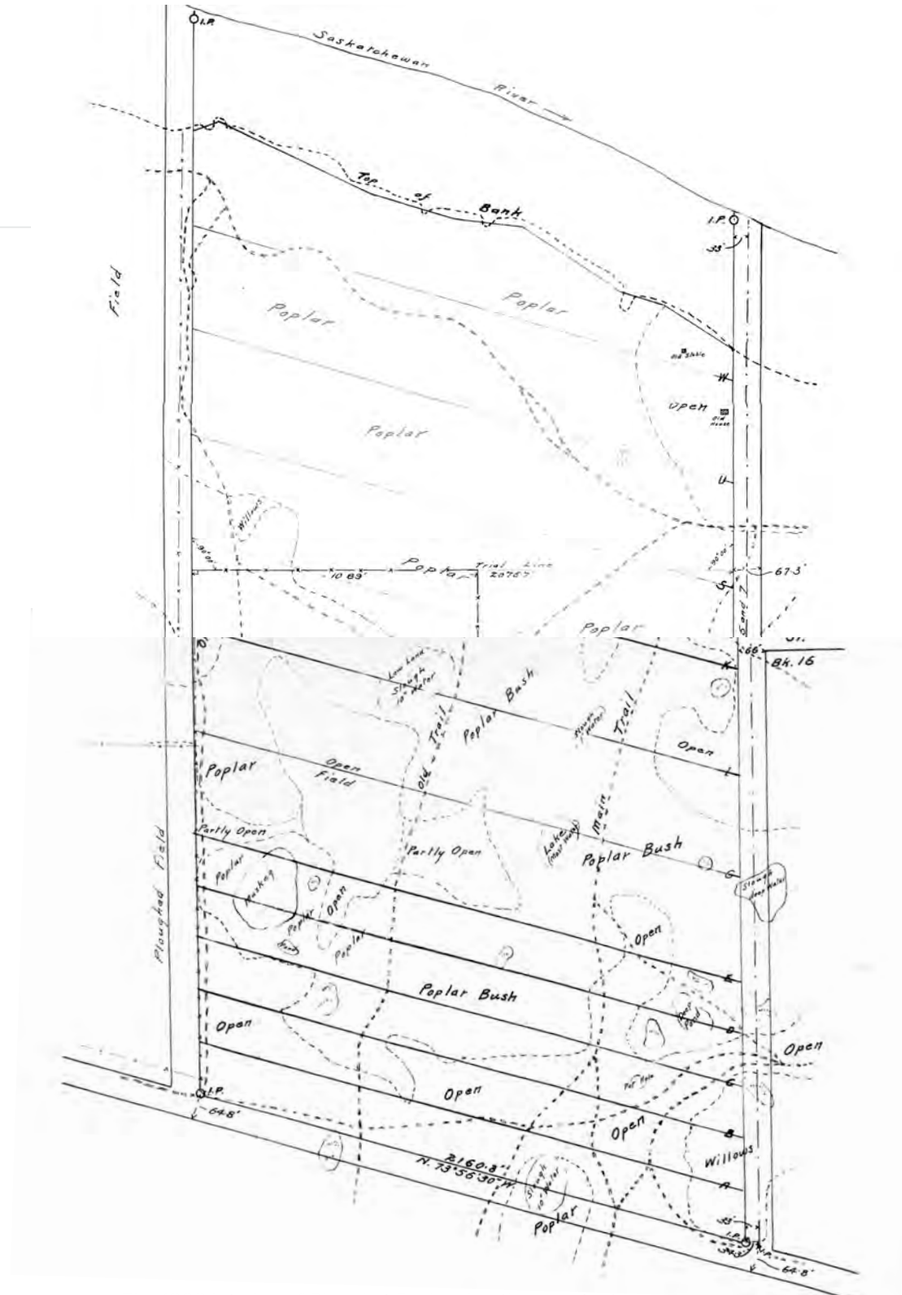
The Central Parkland Ecoregion is dominated by rough fescue intermixed with aspen and balsam poplar stands. However, the majority of native landscapes have dwindled because of favourable agricultural conditions. It is estimated that less than 5% of the Central Parkland Ecoregion is native. Climatic conditions in Edmonton range between cooler northern Ecoregions and the dry Ecoregions to the South; however, summers and winters are markedly warmer than the Dry Mixedwood Ecoregion. Precipitation is highest from June – August, with peaks in July.

The Edmonton region is dominated by winds from the west-northwest, west, and west-south-west directions. These winds typically have low average annual velocities with 29.6% between 0-1 m/s, 22.6% between 1-2 m/s and 16.1% between 3-4 m/s.

2.2 History of the University of Alberta

In the early years of the 20th century, as the population of Alberta and Edmonton continued to expand, the resultant demand for services and infrastructure resulted in a need to create a new university for Alberta. In the spring of 1906, Alberta's first premier, Alexander Cameron Rutherford, introduced "An Act to establish and incorporate a University for the Province of Alberta" – known as the *University Act*. The bill was passed, and Rutherford set to work on addressing the key components of the new institution: a new President, faculty, and of course, a location.

In 1907, Rutherford negotiated the purchase of River Lot 5 from Mrs. Annie Simpson, and her daughter, Mrs. Stokes, for $150,000. River Lot 5, a 258-acre parcel located on the south bank of the North Saskatchewan River directly across from Edmonton, was located on the western edge of the City of Strathcona (which was subsequently annexed to Edmonton in 1912). The University's new home was rather far removed from the development in Strathcona, and despite some cultivation, was mostly covered with poplar and willows. To the east, on River Lot 7, Laurent Garneau, a Metis who had fought with Louis Riel in the 1869 Red River Rebellion, was opening his land up for what would eventually become the residential neighbourhood of Garneau.



▲ The 1908 lot plan of River Lot 5, showing the area that was purchased by the University as the site of the new campus. Source: University of Alberta Archives, UAA 2006-29.

Rutherford had arranged for the *University Act* to be amended in 1907 to accommodate the appointment of a new University President. To fill the role, he hired Henry Marshall Tory, a professor of Mathematics and Physics at McGill University, who had been in Alberta since 1905. With a site selected and a President in place, Rutherford and Tory began planning the beginnings of the new University.

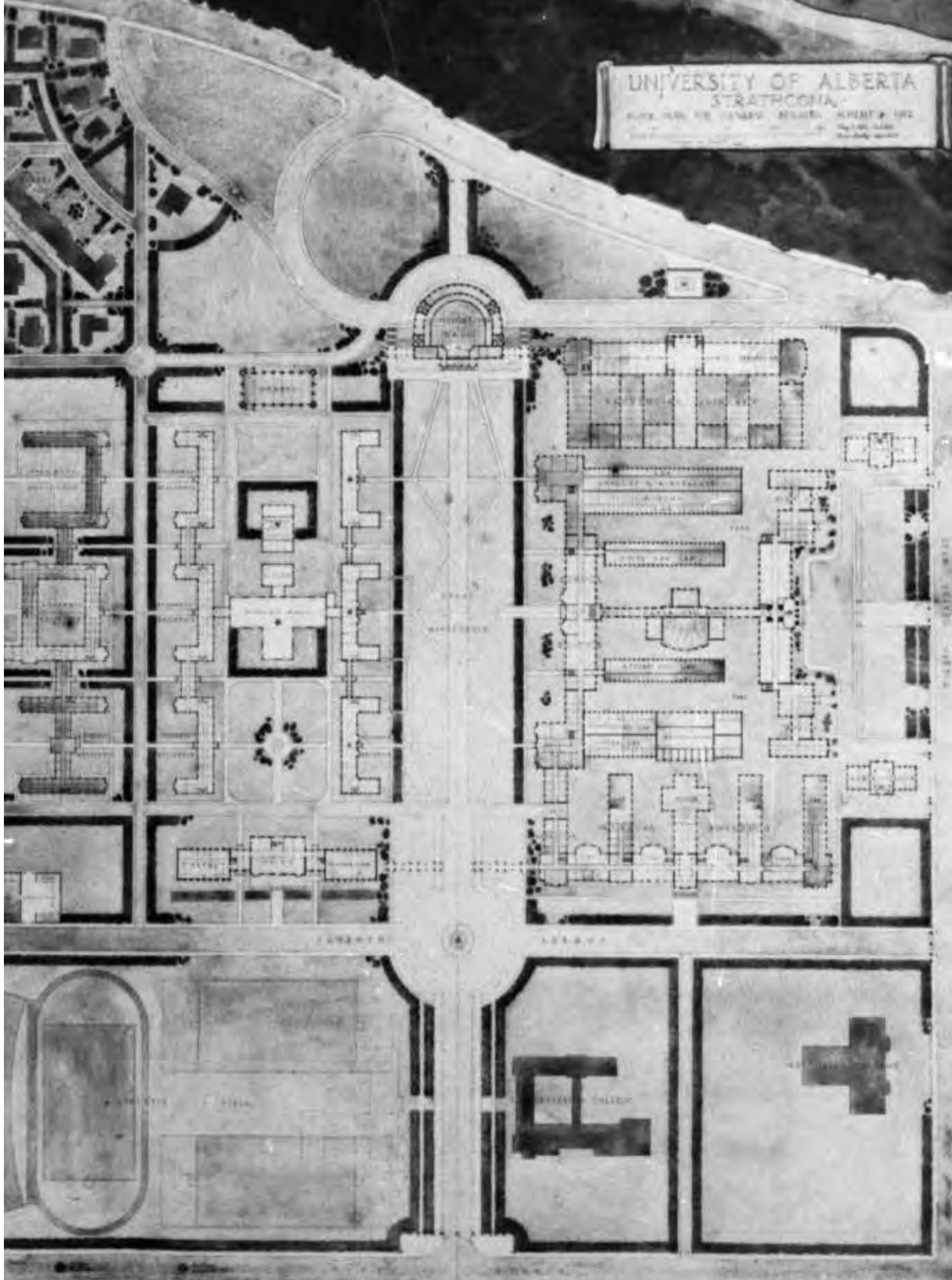
The first building that actually started construction on the campus, in 1909, was Alberta College South (now Old St. Stephen's College), a Methodist seminary that operated independently of the University. Work on Athabasca Hall, the first of three similar buildings intended as the first formal student and faculty residence buildings (required to address the remoteness of the new campus from Strathcona), began in 1910. Athabasca Hall was completed in 1911, and was the first building to be fully occupied on the campus. It accommodated the instruction and associated research activities of the University, as well as serving as a residence. Its location would set the stage for the development of the future Main Quadrangle. Construction began in 1911 on Assiniboia Hall, a second student residence immediately north of Athabasca Hall. The building was completed in 1913, and occupied by students and faculty. Also at this time, the original four homes that were to accommodate Tory and senior professors were built. They were located in the northwest corner of the campus. Additional homes for faculty and staff were built in this location over time in a "ring" configuration, hence the current "Ring Houses" reference. Only the four original homes remain today.

▲ The University's first official building, Athabasca Hall, nearly finished construction in 1911.
Source: University of Alberta Archives, UAA 90-60-8.

2.2.1 Original Vision of the Campus

As the initial development on the campus continued, Tory hired the architectural firm of Nobbs and Hyde out of Montreal to put a campus plan together and design some of the buildings. The campus plan, developed in early 1912, became known as the 1912 Block Plan, as it divided the campus into a number of development "blocks" that would guide the positioning of the first buildings, without prejudicing future projects. True to his nature, Tory's vision for the campus was grandiose, and this was reflected in the Block Plan and associated drawings prepared by Nobbs and Hyde. The plan was based on the principles of Beaux-Arts design, which was characterized by symmetrical plans and the eclectic use of architectural features and buildings, which combined to create a grand and elaborate effect. Many of these features can be seen in the 1912 Plan. Nobbs' original vision saw the river front as the main entrance to the campus, with the University buildings crowning the bluff, which would be visible from the north side of the North Saskatchewan River. The dominant feature of the design concept was the Main Quadrangle, which was supplemented by other open space areas throughout the campus.

The original 1912 campus plan developed by Nobbs and Hyde of Montreal envisioned a grand campus in the classic academic tradition. Source: University of Alberta Archives, UAA 73-124 and UAA 75-50.



To facilitate the ongoing implementation of the 1912 Plan and development on the campus, Tory hired Cecil Scott Burgess, a young architect from Nobbs and Hyde, to become the University's first (and ultimately, only) professor of Architecture and its first University Architect. Burgess would oversee the frenetic amount of growth on the campus in the coming years, and had a hand in designing and managing the construction of many of its original buildings, and setting the stage for the development of an open space network on the grounds.

The third student residence, Pembina Hall, located to the immediate south of Athabasca Hall, was completed in 1914. The redesigned Arts Building, begun and abandoned in 1909, was finally completed in 1915, and was the most expensive building ever constructed in Alberta at that time. Located on the east side of campus, this building was the cornerstone of the University, and the majority of students took their classes here for many years. While the three residence halls fronted onto the Main Quadrangle, the Arts Building fronted its own quadrangle, providing additional open space for students attending in those early years.

The Arts Building in 1930. Originally built in 1915, it has been a central focus of the campus landscape for nearly a century. Source: University of Alberta Archives, UAA 69-97-920.

Corbett Hall, the original Education Building, seen in 1945.
Source: University of Alberta Archives, UAA 69-97-263a.

Over the next few years, additional buildings were added to the campus, including the North and South Labs (approximately 1915), the North Power Plant (1915), the Medical Building (1921), Varsity Rink (1926), St. Joseph's College (1927), and Corbett Hall (1929). The Medical Building (more recently Dentistry/Pharmacy) was constructed with a grant from the Rockefeller Foundation. It housed the Faculty of Medicine, as well as the Departments of Chemistry and Entomology, the Provincial Laboratory for Public Health, and various related activities. Apart from the North Lab and Varsity Rink buildings, all of these early structures still exist and are in use, and form an integral part of the character and feel of the North Campus landscape, from their scale and built form, and also their use of materials such as brick and Tyndlestone as principal building materials.

The 1915 South Lab, today home to Triffo Hall, is the surviving building from the original North and South Labs that were built to the immediate west of the Arts Building.
Source: University of Alberta Archives, UAA 90-60-13.

▲ The 1921 Medical Building was another key component of the original 1912 Block Plan for the campus.
Source: University of Alberta Archives, UAA 69-97-446.

2.2.2 Evolution of the Campus

From its founding in 1908 on River Lot 5, a site largely covered with poplar trees and bush on the bank of the North Saskatchewan River, to the present, the North Campus has always been closely tied to the surrounding landscape. That landscape has changed dramatically over the past century, from a rural setting on the edge of the then City of Strathcona, to today's context as being completely immersed in the bustling urban fabric of Edmonton. The original Beaux-Arts concept developed by the 1912 Block Plan proposed a symmetrical and rectilinear design, which has morphed over time into a more eclectic layout. Still, the backbone of that original plan can still be seen in the orientation of the Main Quad and the dominating axes of 89 Avenue and 114 Street. Over the years, the landscape has matured, and horticultural interests of academics and maintenance staff over the years have resulted in a unique blend of vegetation, many types of which would not be normally found or able to thrive in this part of the province.

Construction and growth of the campus continued modestly during the First World War, with several students electing to serve in the conflict, but development dramatically increased in the post-war years in the 1920s. Several new buildings were added, and enrollment surged, supporting advancements in the curriculum and the emergence of a true campus community. The formal landscape was still evolving, so students and staff regularly walked through tree stands and used boardwalks to navigate the natural turf during wet periods. Many of the mature trees that can still be found on campus were planted during this period, which would, over time, create one of the most significant character elements of the campus landscape.

The 1930s saw little development on the campus grounds, but enrollment continued to climb. Boardwalk connections were replaced with concrete in select locations, and the landscape slowly became more urbanized. The outbreak of the Second World War in 1939 saw another surge of enlistments and military training activities taking place on the campus. Buildings such as Corbett Hall, Athabasca, Assiniboia, and Pembina Halls, and St. Joseph's College were taken over by military personnel for training, and became off-limits to students. A large drill hall was also built on the site of the current University Hall. At the conclusion of the war, the massive surge of students required the University to depart from the original 1912 Block Plan in favour of rapid development to accommodate the new population. A key transition was the emergence of automobiles as a popular mode of travel, forcing the campus to begin accommodating parking and vehicle traffic.

Into the 1950s, rapid development continued, particularly in the engineering and science areas of study. Buildings such as Rutherford South, the South Academic Building (originally the Engineering Building), Earth Sciences, the Administration Building, and the Van Vliet Centre were constructed in this period. Formal connections between buildings on the campus were extended, with the site developing a more urban and academic feel. Despite the rapid development over the years, the Main Quad still retained its central location and presence, remaining largely untouched from the original campus vision.

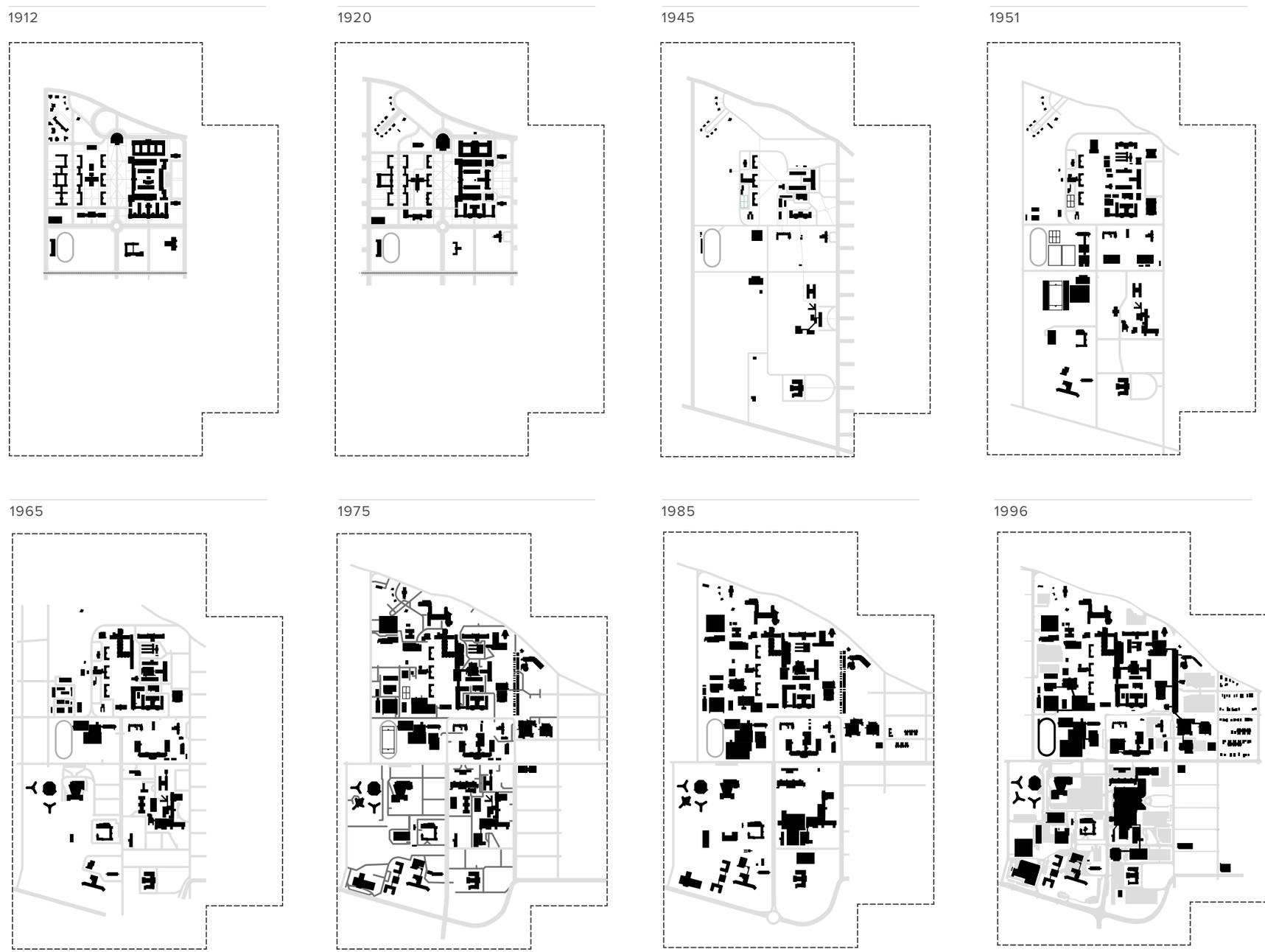
The 1960s saw an incredible surge in enrollment, from 9,000 to nearly 25,000, due to the baby boom population beginning to enter university studies. The satellite University of Alberta campus that had been established in Calgary officially became the University of Calgary in 1966. The University created a planning office, and the first serious long-term planning activities for the campus in many years began, with Toronto architects A.J. Diamond and Barton Myers creating long-range plans. Decisions were made to limit the movements of personal vehicles on the campus, in order to create a more focused pedestrian environment. As new buildings were developed, associated landscaping was provided, contributing to the already-significant mature tree canopy on the campus.

Significant campus development continued in the 1970s, with several buildings, including Mechanical Engineering, the Central Academic Building, Fine Arts, the Law Centre, Rutherford North, the Humanities Centre, HUB International, Chemistry East, and additional medical buildings being added to the sprawling campus. The demands for land to accommodate growth resulted in an expansion of the original campus lands to the east into the Garneau community. By this time, the surrounding communities had been completely built out, placing the campus in the middle of a very urbanized area.

While student enrollment continued to grow into the 1980s and 1990s, little development occurred on the campus. Budget cuts in both decades made by the Provincial government were significant, and caused major challenges for the University to adapt. The campus landscape continued to mature, with little or no remnant of the former original farm site remaining. The few remaining undeveloped sites left on the campus were slowly but surely being occupied. Major open space assets such as the Main Quad, Arts/Business Quad, and the Engineering Quad retained their significant presence, although not always without risks. The development of the new Business Building was relocated after the original proposed site on the Arts Quad caused protests. The connection of the campus to the City of Edmonton LRT system in 1994 made it much easier for students, staff, and visitors to access the campus. Today, the University station is the busiest station in the City's LRT network, with over 30,000 people arriving by train every day (coupled with nearly 13,000 people a day that use the Health Sciences/Jubilee station).

The campus continued to experience extraordinary growth through the balance of the 1990s and into the 2000s, with the addition of over 2.5 million square feet of additional academic and research space. Some of the major complexes developed in this time period included: Timms Centre for the Arts (1994); Telus Centre (2000); Engineering Teaching and Learning Complex (2001); Electrical and Computer Engineering Research Facility (2001); Natural Resources Engineering Facility (2004); Zeidler Ledcor Centre (2005); National Institute for Nanotechnology (2006); Li Ka Shing Centre for Health Research and Innovation (2007); Katz Group Centre for Pharmacy and Health Research (2008); Centennial Centre for Interdisciplinary Science (2011); Edmonton Clinic Health Academy (2012); and the 89 Avenue Graduate Student Residences (2013). At present, several major development projects are underway on the campus, including: the Physical Activity and Wellness Centre; the Innovation Centre for Engineering; and a new Women's Residence for St. Joseph's College.

More recently, the University has focused on enhancing existing open spaces and pedestrian/bicycle facilities, in order to create a more walkable and sustainable campus. More ecological approaches to the landscape have been adopted, including the use of native, drought-tolerant species and sustainable approaches to stormwater management and maintenance. The North Campus of today presents a feeling of high quality development and landscaping that creates a true sense of community in an urban context, very different from its initial circumstances.



▲ Since its early beginnings, the design of the campus landscape and the provision of open spaces were critical components to the development of the North Campus.
Source: University of Alberta Facilities and Operations.

2.3 The Campus in the City and Community

The Campus in the City

The University of Alberta has a population of over 39,500, comprised of students from all Canadian provinces and territories, and 152 other countries, participating in close to 400 undergraduate, graduate and professional programs in 18 faculties. An additional 8,500 students are enrolled in the University's Faculty of Extension. In a typical year, the University graduates over 9,300 students. It is the fourth-largest employer in Alberta, with over 15,000 permanent and temporary staff over its five campuses. The University's impact on the Alberta economy is estimated at $12.3 billion annually, or 5% of the province's gross domestic product. The combined student population and staff complement would place the University within the ten largest municipalities in Alberta.

The North Campus enjoys both a strategic and picturesque setting in the city of Edmonton. Located centrally, the North Campus is easily accessed from all quadrants of the city, particularly given its location on the Capital and Metro lines of the LRT system. The campus is also well-served by buses from the transit systems of the City of Edmonton, Strathcona County, and the City of St. Albert. The North Campus' location on the LRT and bus network also affords easy connection to the University's other campus locations – South Campus (LRT and bus), Enterprise Square in downtown Edmonton (LRT and bus), and Campus Saint-Jean (City bus and shuttle bus).

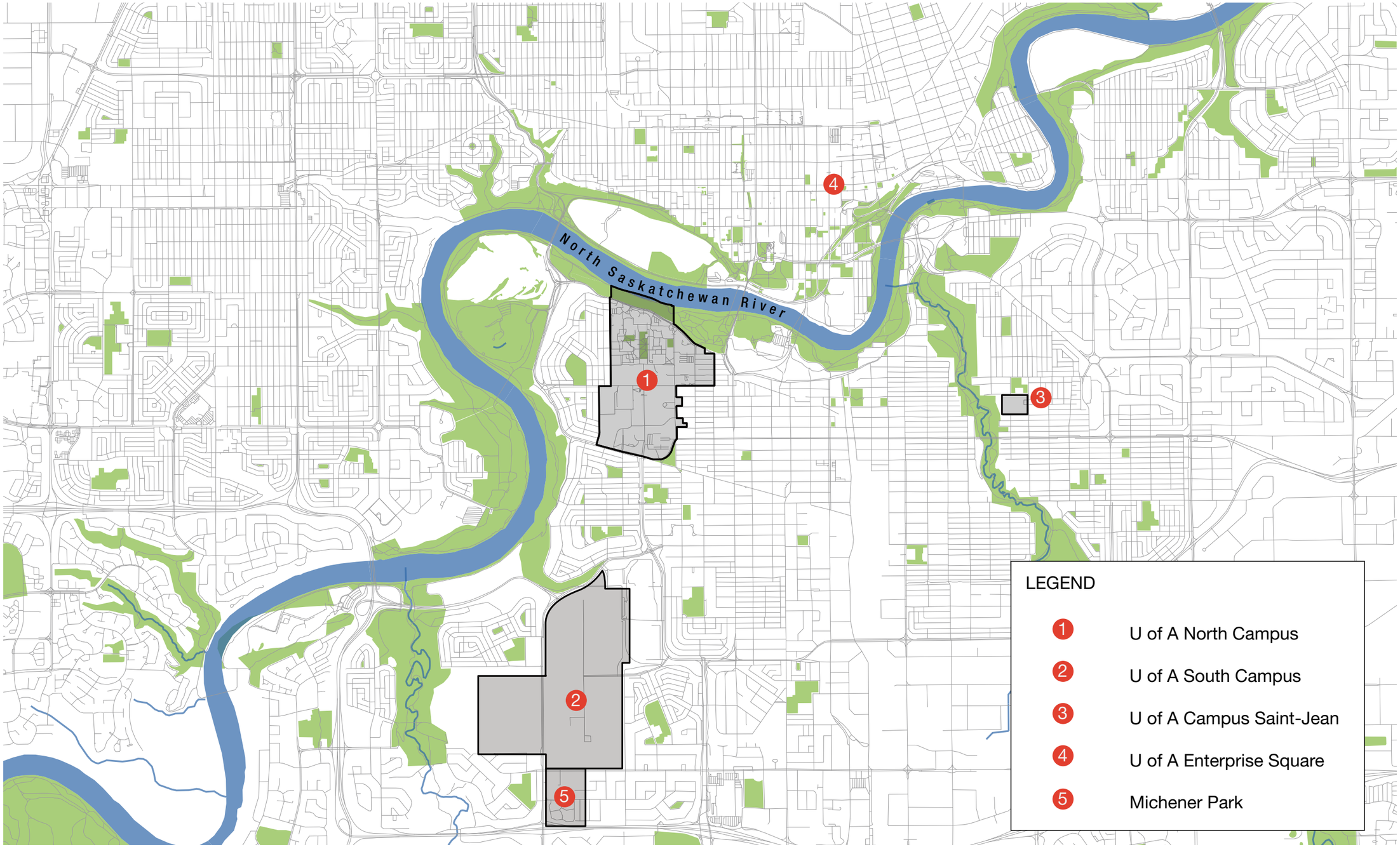
Located directly across the North Saskatchewan River from the Provincial Legislature complex and Edmonton's downtown, the North Campus benefits from convenient access to government ministries and officials from both the Province and the City, as well as business and community partners.

The North Campus also enjoys a prime location with extensive frontage on the north end of campus along the top-of-bank of the North Saskatchewan River valley. This location offers excellent views from the campus to the downtown and Legislature precinct, but also provides a view profile for the campus itself from the north side of the river. The North Campus is well-connected to the extensive trail and park network in the river valley, and also serves as an excellent outdoor laboratory for studying the ecology of the central Alberta region.

Recognizing its important relationship with the city of Edmonton, the University strives to complement the City of Edmonton's broad objectives, such as The Way Ahead, and detailed policy documents such as The Way We Grow, The Way We Move, and The Way We Green.

The North Campus, located to the south of Edmonton's downtown, retains its central presence on the south bank of the North Saskatchewan River. Source: Peak Experience Imagery.

Figure 1: University of Alberta campuses in Edmonton



Timms Centre for the Arts

Edmonton Clinic Health Academy

National Institute for Nanotechnology

Aside from its primary role as an educational and research institution, the North Campus also serves as a busy hub of activity for the wider Edmonton region. A range of cultural, recreational, medical, and research services are offered at the North Campus that are regularly used by citizens in the region, including:

- Timms Centre for the Arts
- Universiade Pavilion (the Butterdome)
- Clare Drake Arena (part of the Van Vliet Complex)
- TELUS Centre
- University libraries
- Faculty Club
- Alumni House
- Rutherford House Provincial Historic Site
- Lister Conference Centre
- Physical Activity and Wellness Centre (part of the Van Vliet Complex)
- Myer Horowitz Theatre (in Students' Union Building)
- Convocation Hall
- Edmonton Clinic Health Academy
- National Institute for Nanotechnology

These uses are a regular draw for visitors from Edmonton and throughout the wider region, and bring activity into the area on a daily basis beyond the main academic activities of the University.

In addition, a number of uses and services exist on non-University lands within the North Campus environment that also draw many people to the area, including:

- Northern Alberta Jubilee Auditorium (also used by the University for Convocation ceremonies)
- Walter C. MacKenzie Health Sciences Centre
- Stollery Children's Hospital
- Cross Cancer Institute
- Mazankowski Alberta Heart Institute
- Kaye Edmonton Clinic
- Alberta Culture (located in Old St. Stephen's College building)

The Campus in the Community

The North Campus' location in Edmonton is a very urban context, having been originally sited well before development occurred in the area. Over time, a number of residential communities have developed around the campus, resulting in a circumstance where the University lands are intimately inter-connected with area residents and businesses. Brief profiles of the adjacent communities are provided below.

GARNEAU

The Garneau community is located to the immediate east and southeast of the North Campus, to the east of 110 Street, and also north and south of 87 Avenue, west of 109 Street. Garneau is named after Laurent Garneau, an original landowner of River Lot 7, which later became this residential neighbourhood. An original tree planted on his homestead in approximately 1874 can still be found on campus, on the west side of 111 Street, just north of 90 Avenue. The community itself began development around 1912, when the former City of Strathcona was amalgamated with Edmonton. The neighbourhood is predominantly residential in nature, with a large amount of student and fraternity housing. Many older homes still remain throughout the area; however, a number of medium and high-rise residential buildings have been constructed over time. The 109 Street corridor is commercial in nature, and the neighbourhood is at the west end of the popular Old Strathcona area along Whyte Avenue.

MCKERNAN

The McKernan community is located to the southeast of the main campus, south of University Avenue and east of 114 Street. Originally developed in the 1930s, the McKernan area was also part of the former City of Strathcona until its amalgamation with Edmonton in 1912. Major development in the area was delayed until the 1940s, in the post-Second World War housing boom. While the community is predominantly single detached residential in nature, there are some multi-unit residential buildings, many of which provide housing for University students. McKernan shares a new LRT station (Belgravia-McKernan station) with the Belgravia neighbourhood to the west, providing easy access to the North Campus.

Surrounding communities have a direct interface with the North Campus. Source: Peak Experience Imagery.

BELGRAVIA

The Belgravia community is located to the southwest of the main campus, south of University Avenue and west of 114 Street. The first development in Belgravia began in 1912, when a local landowner (Robert Tegler) opened the area up for residential uses. Much of the development in the community occurred prior to 1960; however, there has been a significant amount of redevelopment over recent years. As with McKernan, some multi-unit residential development has taken place, much of it providing housing for University students. Many homes in the area are also rented by students. Belgravia shares a new LRT station (Belgravia-McKernan station) with the McKernan neighbourhood to the east, providing easy access to the North Campus.

WINDSOR PARK

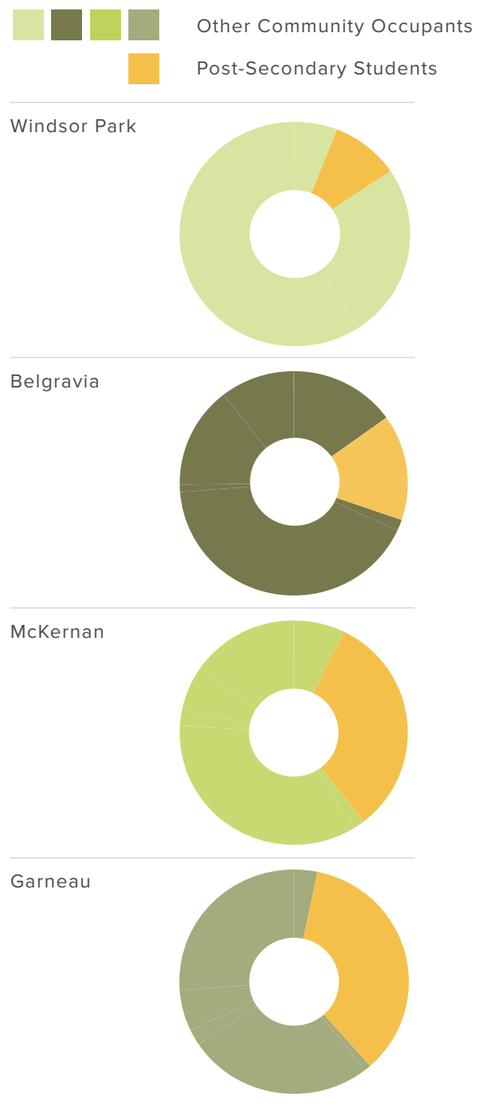
Located to the immediate west of the campus, west of 116 Street, north and south of 87 Avenue, Windsor Park was originally created in 1911; however, development in the area did not occur in any substantial way until the 1940s. The community is almost entirely an enclave of single detached residential development. A small number of commercial uses that directly serve the University are located just west of 116 Street on 87 Avenue. The neighbourhood is popular with University staff and faculty.

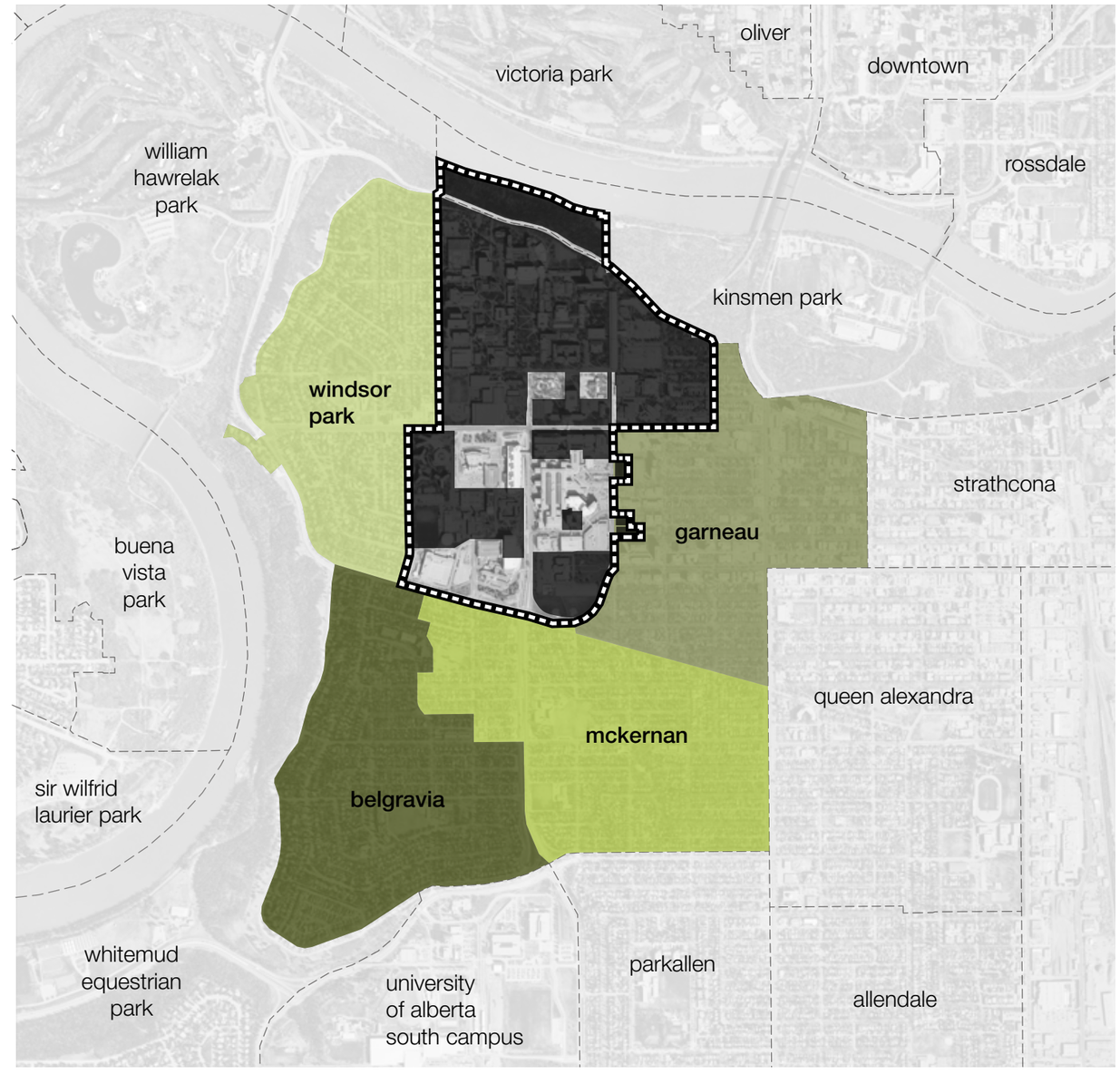
The North Campus forms part of the fabric of its surrounding communities.
Source: Peak Experience Imagery.

4906 Post-Secondary Students

The urban setting of the North Campus features a number of adjacent residential communities. Nearly 5,000 post-secondary students call these neighbourhoods home.

Source: Statistics Canada.





2.4 Planning Context – Relevant University Plans and Policies

2.4.1 Dare to Discover

The Dare to Discover document outlines a broad vision for the University of Alberta to become one of the world's top universities. It identifies the key values that will guide the University's actions, drawn on the principles on which the University was founded in 1908. A vision statement is included:

"To inspire the human spirit through outstanding achievements in learning, discovery, and citizenship in a creative community, building one of the world's great universities for the public good."

Dare to Discover is anchored on four cornerstones that provide the foundation for a great university. These include:

- Talented People
- Learning, Discovery, and Citizenship
- Connecting Communities
- Transformative Organization and Support

The direction and vision established by Dare to Discover should be reflected in the North Campus Open Space Plan, understanding the key role the physical environment of the campus plays in the day-to-day experience of students, faculty, and administration and other visitors to the University.

2.4.2 Dare to Deliver – Academic Plan 2011 – 2015

Dare to Deliver, the University's Academic Plan for 2011 – 2015, takes the vision and direction established in Dare to Discover and translates it into more detailed strategies and action items, structured around the four cornerstones identified above.

The Academic Plan addresses the two main components of a successful university – quality professors, researchers, administration, and support staff from the academic perspective, and quality undergraduate students, graduate students, and post-doctoral fellows who are the lifeblood of the University. The Plan recognizes that collegial governance and a high quality academic experience are equally as important as an outstanding student experience.

The North Campus Open Space Plan has a tremendous opportunity to set the stage for an improved physical landscape of the North Campus, enhancing the experience of the University for all users, both from the student and academic populations.

2.4.3 2013 Comprehensive Institutional Plan

The Comprehensive Institutional Plan (CIP) uses the vision established in Dare to Discover and the strategies outlined in Dare to Deliver to develop a detailed approach to how the University will actually operate, addressing topics such as: access and programming; research, scholarship, and creative activity; capital planning; institutional budgeting; and resources and risk implications. A number of goals and related strategies are developed for each of these areas, providing a number of specific initiatives and targets for achieving the broader objectives of the University, while addressing the day-to-day operational aspects that are equally relevant. While the direction of the North Campus Open Space Plan will largely be implemented through the on-going capital planning process, a high quality campus landscape can play a role in achieving other University mandates, both from an academic and student experience perspective.

▼ 89 Avenue promenade.

2.4.4 Long Range Development Plan

The Long Range Development Plan (LRDP), first adopted in 2002, is the primary land use planning and development framework that the University uses to guide how land at its various campuses is actually built upon. The Plan provides generalized development concepts for the various campuses, identifies supporting plan elements, and outlines initiatives and guidelines for land use. The Plan provides an important overview of the approach to land development that the University will be undertaking on its various campus lands, including North Campus.

The 2002 LRDP outlines a number of issues that guide land use and development of campus lands, including:

- Growth pressure
- Transportation
- Utilities and infrastructure
- Facilities and land use
- Social and cultural issues
- Neighbouring communities
- Implementation

To address these issues, the 2002 LRDP identifies a number of strategic planning principles that are intended to guide long range development, many of which are relevant to the North Campus Open Space Plan. These include:

- The LRDP reflects the University's indisputably-recognized role in Edmonton and Alberta as a major economic partner, in Canada as an academic and research leader, and internationally as a center of vision and achievement.
- The physical assets and facilities of the University will be responsive to the strategic, academic, and research goals of the University.
- Each University campus, or sector of each campus, will evolve its own character, identity, and diversity within the University's overall culture.
- Academic and research communities will be fostered throughout the University's campuses/sectors.
- The University will encourage and promote the precepts of smart growth and sustainability.
- The University will be a welcoming, attractive, memorable, accessible, and safe community.
- The University recognizes its partnership with the greater Edmonton community, to the benefit of students, faculty, and staff.
- The University will accommodate mutually-beneficial collaborative partnerships that assist in achieving strategic academic and research goals.
- The LRDP will be reviewed and updated periodically to reflect the University's strategic goals and directions.

The Open Space Plan addresses these principles, and reinforces the direction of the 2002 LRDP.

Building on the above principles, the 2002 LRDP addresses the four main campuses (that were in effect as of 2002) of North Campus, South Campus, Michener Park, and Faculte Saint-Jean through the preparation of development concepts. Each concept considers the specific campus through policy statements that speak to:

- Land use pattern, (including the identification of sectors within each campus, a focus on smart growth and planned community principles, development sites, campus life and housing, open space system, and heritage considerations)
- Transportation systems
- Service vehicle routing
- Pedestrian and bicycle circulation
- Parking
- Community linkages
- Gateways
- Utilities

Specific to the North Campus Open Space Plan, the 2002 LRDP identifies that:

"Existing significant open spaces will be retained and reinforced whenever possible. New open spaces will be developed to balance the effects of increased density, to improve livability and the sense of community on this campus."

The 2002 LRDP also identifies a number of plan elements, initiatives, and guidelines that apply generally to all campuses, with several campus-specific components. These include:

- Transportation – vehicles and transit
- Parking
- Bicycle access and circulation
- Pedestrian access and circulation
- Land use patterns
- Facilities and built form
- Heritage buildings and sites
- Open space and landscape resources
- Gateways and way-finding
- Infrastructure
- Environmental considerations
- Edge conditions and neighbouring lands
- Implementation, administration and monitoring

Many components of the 2002 LRDP will have a direct impact on the direction taken for the North Campus Open Space Plan. Specific policies included in the 2002 LRDP that relate to open space on the North Campus and have been considered by the Open Space Plan include:

SAFE, ATTRACTIVE AND WEATHER-PROTECTED PEDESTRIAN MOVEMENT

Pedestrian movements on campus should be safe, attractive, and protected from the weather to the extent practical. Landscape should be designed to protect walkways from strong winds and inclement weather.

EFFICIENT DEVELOPMENT

The University should be efficient in developing and using its lands. In built environments, undeveloped spaces and under-utilized spaces between existing buildings should be evaluated as sites for new academic, research, and support facilities and open/activity space.

PRESERVE SIGNIFICANT NATURAL AREAS

Significant natural areas on University lands should be preserved where practical.

IMPROVE HUMAN AND NATURAL ENVIRONMENTS

Physical development should improve human and natural environments on campus. Development guidelines should be prepared for each site to address: aesthetics and urban design; built form; height and landscape parameters; daylight and sun exposure; views and vistas; sensitivity to natural habitat; and lighting of buildings, sites, and streets in terms of aesthetics, security, and environmental enhancement.

RECREATION FACILITIES AND FIELDS

Students, faculty, and staff will have access to recreation facilities and fields. The University should retain an inventory of recreation fields and facilities that provides a range of opportunities to maintain and improve physical health.

Main Quad and the South Academic Building.

DEVELOPMENT COMPATIBILITY AND SECTOR PLANS

Design and development of facilities should be carried out in a manner that is compatible with its immediate surroundings. Sector Plans should provide guidance to future development regarding: available development sites; development guidelines including height, massing, site coverage, setback and other related criteria that outline the historic, physical, academic, social, and culture character of the sector; pedestrian and bicycle system considerations; open space considerations; and land use compatibility, adjacency, and transition issues.

HIGH QUALITY ARCHITECTURE AND URBAN DESIGN

The University should promote and expect a high quality of architecture on all of its campuses. Building design proposals should include a usable and attractive open space element that contributes to the quality of the development.

HERITAGE BUILDINGS AND SITES

Historic buildings, sites and landscapes are the elements that evoke the memories of place and community for students, faculty and staff, and for the citizenry as a whole. The University campus is a cultural landscape with historically and architecturally significant buildings and sites. A Heritage Walk should be developed to integrate with the pedestrian system and be used to guide new students, alumni and visitors on a tour of the University's heritage, as identified through facilities and landscapes.

OPEN SPACE AND LANDSCAPE RESOURCES

Open space and green space are considered by many to be integral elements of livable communities such as a campus. Open space should be treated as an equal partner to built space. The University's developed campuses have various networks of open space that serve as organizing elements, amenities and activity areas.

OPEN SPACE AS A DEVELOPMENT FOCUS

Open spaces should function as foci for campus development. They should assist in organizing patterns of growth and redevelopment activities.

OPEN SPACE IN DEVELOPMENT PROJECTS

All new facilities being planned and designed should include as part of their development appropriate open space that improves the human and physical environment on campus.

PUBLIC ACCESS TO RIVER VALLEY SYSTEM

Campus development will preserve public access and vista opportunities to the river valley system.

GATEWAYS AND WAY-FINDING

The first physical impressions of the University are at the access points on the periphery of campus. At these gateway points, it is important to orient those arriving at the campus and to create a strong, positive impression of arrival. Once on campus, it is important to be able to direct movements in an efficient and direct manner.

CAMPUS ENTRANCES AS GATEWAYS

Campus entrances should be developed as gateways to each campus.

SIGNAGE AND URBAN DESIGN AIDS

Signage and urban design elements should be used to support the on-campus circulation system to efficiently direct people to their destinations.

DEVELOPMENT TRANSITION

Transition provisions between University projects and neighbouring land uses should be developed in general on a sector basis and in detail on an individual development basis.

LRDP Amendment

The LRDP underwent a significant amendment process in the fall of 2013 and early part of 2014, focusing on matters pertinent to the North Campus. This amendment, known as Amendment XX, addressed the following issues:

- The University of Alberta's students, faculty and staff, along with neighbouring communities and other stakeholders, have expressed interest in the principles of smart growth and planned communities. This LRDP amendment reinforces these principles.
- The 2002 LRDP planning principles have laid the foundation for guiding further planning and development of University of Alberta campuses.
- The amended North Campus LRDP document will include changes to sections 6 and 7 of the 2002 document.
- North Campus will continue to be the urban campus site of the university. This will create one of the most densely populated campuses in Canada.
- North Campus will be the primary campus of the university for the next 30 years and will be the hub for a majority of the university's faculties and facilities.
- The land use and campus element plans for the North Campus reflect the strategic planning principles of the 2002 LRDP. The subsequent illustrative series of plans captures physical systems and elements that require supervision and management. This section offers system-specific initiatives and guidelines appropriate to those systems.

The LRDP amendment also introduced two new sets of development principles that support this new focus on smart growth and planned communities.

▲ The view of Athabasca Hall from the Main Quad has changed little over the past century.

Engineering Quad.

SMART GROWTH PRINCIPLES

- Pursue a healthy and sustainable campus
- Realize operational, academic and social benefits to the university and surrounding communities
- Promote greater connections and communication with the surrounding community
- Create lasting, meaningful and accessible places
- Promote a pedestrian-oriented campus to the extent possible, while maintaining barrier-free access and services to various facilities
- Promote smart growth with each phase of campus development

PLANNED COMMUNITY PRINCIPLES

Our campuses will embody and balance social, ecological and economic sustainability in every aspect of campus design and function by:

- Enhancing and building upon the existing sustainability and resource stewardship philosophy of the U of A by balancing the three spheres of sustainability: social, economic and environmental
- Creating an academic and residential environment that fosters the energetic exchange of ideas and creates a unique sense of place
- Promoting opportunities for all U of A campuses to act as living laboratories, utilizing the site for the testing and integration of urban design innovations
- Providing strong connections with neighbouring communities, allowing for shared amenities and services
- Supporting and advancing the University's goal of becoming one of the world's top public educational institutions
- Making optimal use of the University's budgetary resources and partnership funding

The LRDP amendment supported the ongoing enhancement of the cultural landscape of the North Campus, through a continued pledge to preserve its numerous historically and architecturally significant sites, as outlined in the 2002 LRDP.

The LRDP amendment also outlined a continued commitment to the development and enhancement of the open space network on the North Campus, and included a new Open Space System map.

Saskatchewan Drive, heading east along the top of the bank of the North Saskatchewan River valley.

2.4.5 2012 – 2016 Sustainability Plan

The University of Alberta has been incorporating sustainability initiatives on its campuses for over thirty years. To support this commitment, an Office of Sustainability was created in 2009, with a mandate to promote, unite, and celebrate sustainability in three key areas: facilities, operations, and services; outreach and engagement; and teaching and research. Building on this new mandate, the University has prepared a Sustainability Plan that outlines performance measures and goals and key priorities for the 2012 to 2016 period. The document outlines a range of quick wins and incremental changes, but also more deeply-rooted initiatives that may require substantive shifts to overall policy and governance. The direction of the plan supports the Sustainability Tracking, Assessment and Rating System (STARS) used by the University to measure and report on the institution's sustainability performance.

Related to the Open Space Plan, the Sustainability Plan outlines a goal and specific strategies to support sustainable practices for landscape maintenance on the University's campuses.

Goal

Further develop sustainable grounds management practices through the incorporation of ecological principles, while fulfilling the recreational needs and aesthetic standards of the University community.

Strategies

- Implement the amount of domestic water used for irrigation and explore opportunities to use recycled storm water.
- Complete the Organic Turf Management Pilot Project and assess for implementation of regime across campus.
- Build a solar-electric charging station for our electric grounds vehicles.
- Promote increased use of native plant species on campus.
- Continue to evaluate possible alternatives to concrete in hard landscape construction and maintenance and identify other Low Impact Development best practices for possible implementation on campus.
- Continue to deploy organic herbicides in hard to manage areas or where hand-picking of weeds is unsafe.
- Increase integration of edible landscaping into campus grounds.
- Work to increase biodiversity on campus.
- Ensure no net loss of tree cover element.

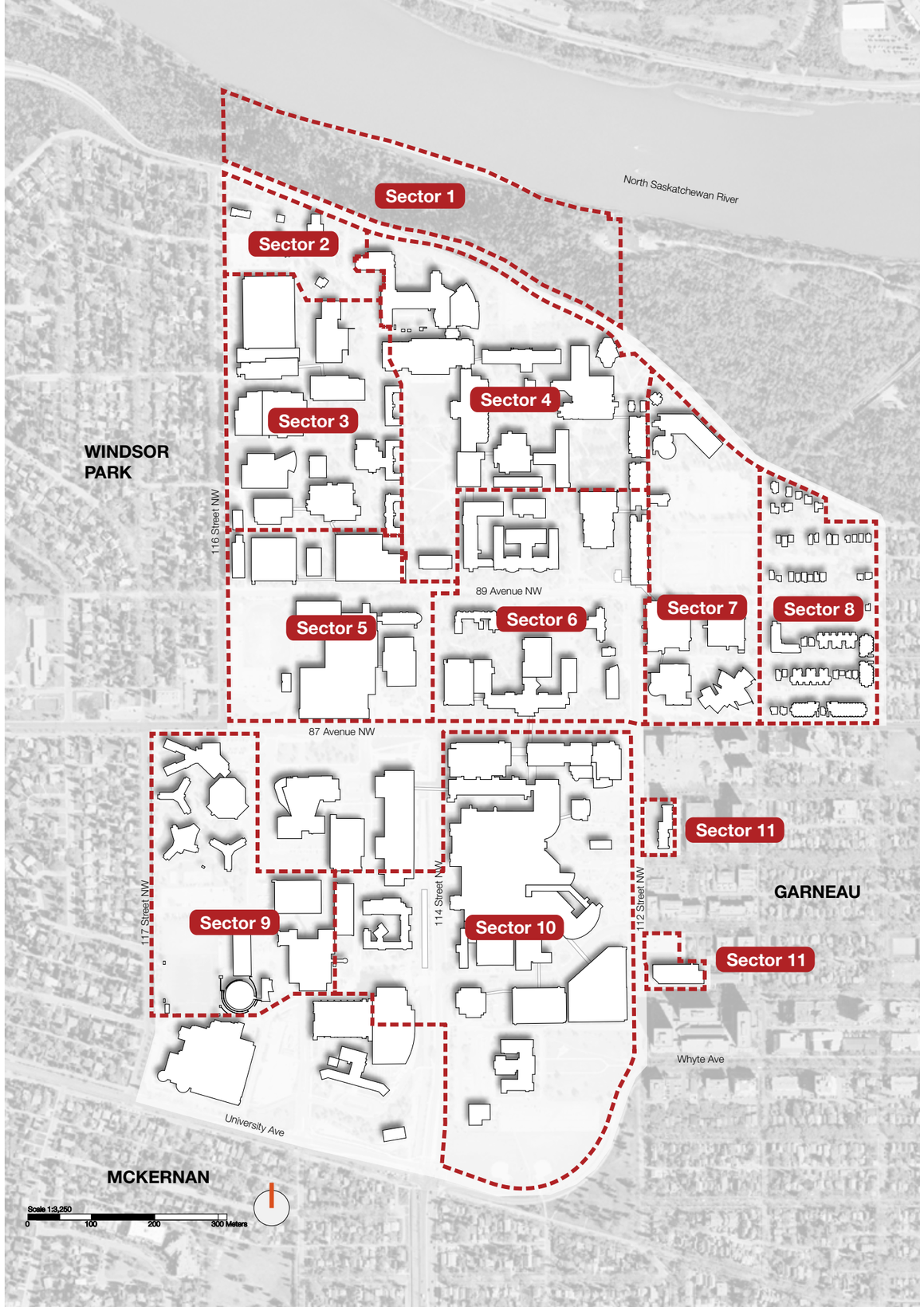
The University has been named one of Canada's greenest employers for six straight years, as featured in the *Globe and Mail*, recognizing its ongoing commitment to sustainability. On the development side, three buildings on North Campus have been certified under the Canadian Green Building Council's Leadership in Energy and Environmental Design (LEED®) program. These include:

- Triffo Hall – Gold certification (2009)
- Graduate Student Residences, East Campus Village – Silver Certification (2013)
- Centennial Centre for Interdisciplinary Science – Silver Certification (2013)

At present, the University is also seeking sustainability certifications on a number of other buildings and facilities, including the following on North Campus:

- Edmonton Clinic Health Academy – LEED® Silver certification
- Innovation Centre for Engineering (currently under construction) – LEED® Gold certification
- Cooling Plant – LEED® Silver certification
- Physical Activity and Wellness Centre (currently under construction) – four Green Globes (coordinated by the Building Owners and Managers Association (BOMA) of Canada)
- 89 Avenue Student Residences, East Campus Village – four Green Globes

Triffo Hall, originally the 1915 South Lab, now home to the Killam Centre for Advanced Studies, and the University's first LEED® Gold-certified building.



2.4.6 North Campus Sector Plans

The University of Alberta's campus lands are typically organized around Sectors, which divide each campus into smaller sections for land use planning, operations, and maintenance purposes. The North Campus is organized into eleven such Sectors, as identified on Figure 2. The LRDP identifies the use of Sector Plans for more detailed land use planning and design initiatives on the various University campuses within the respective Sectors. These plans are intended to provide guidance to future development regarding:

- Potential development and redevelopment sites that address Faculty, University services and other expansion requirements.
- Guidelines for effective and compatible development and redevelopment activities within and between each Sector.
- Identification of the required physical linkages to adjacent Sectors and the interface with adjacent neighbours and University partners.

The University will use the Sector Plans, in conjunction with the LRDP, to assist future planning and development initiatives within each Sector and determine if individual development or redevelopment projects are consistent with the directions and guidelines provided.

At present, not all Sectors identified have had a Sector Plan prepared for them. While the *Alberta Post-Secondary Learning Act* requires the University to prepare and keep current the LRDP, there is no specific requirement for land use and development planning documents beyond that for post-secondary institutions. The University has determined there is value in preparing Sector Plans for its campuses (or portions thereof).

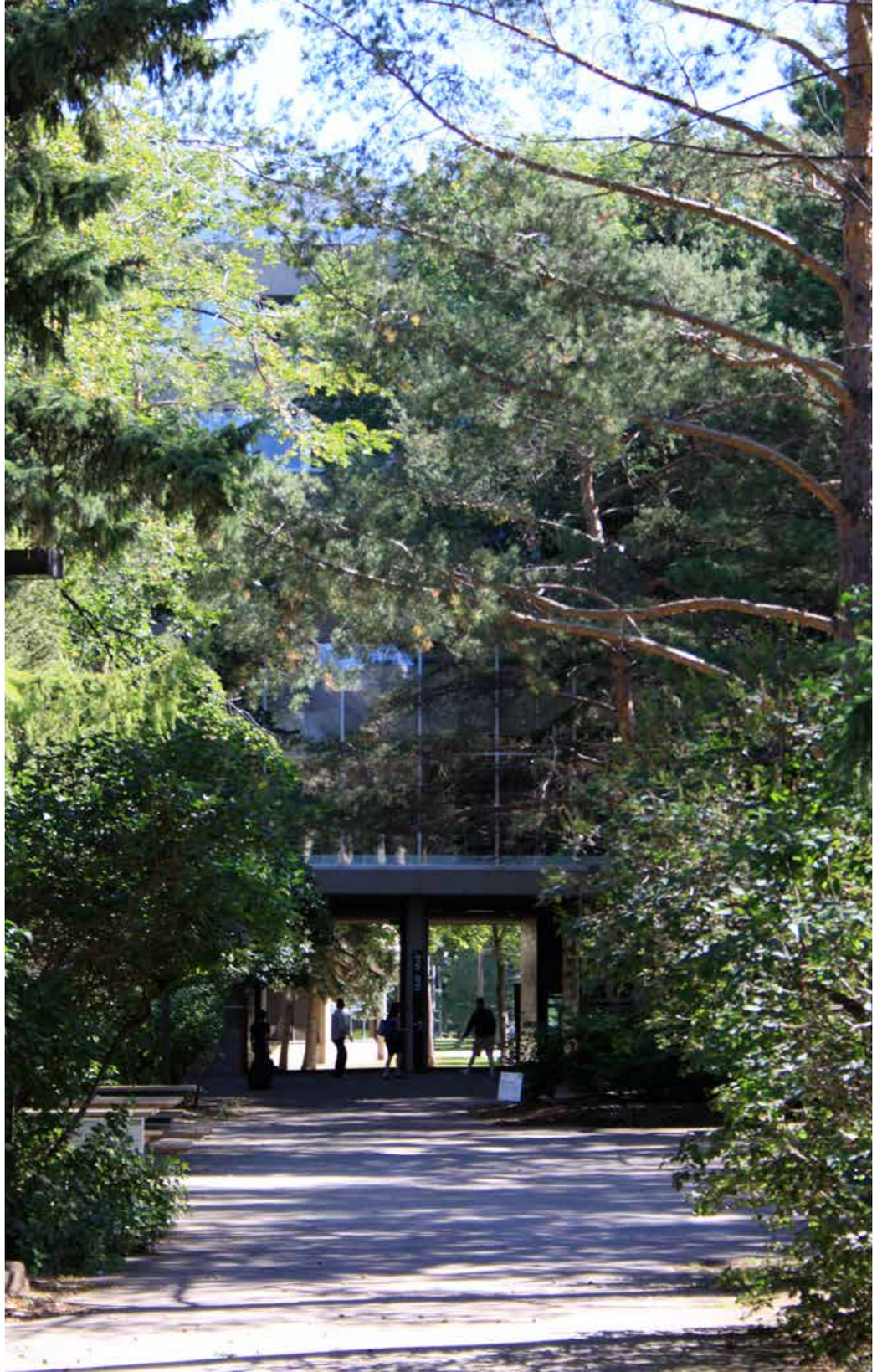
Figure 2: North Campus planning Sectors.

Specific to the North Campus, the LRDP identifies that Sector Plans should identify potential development sites and development guidelines that will address Faculty expansion and preserve precincts. Sector Plans are also intended to help promote a high quality of design on campus, including a focus on improved livability and architectural character, and usable and attractive open space elements that contribute to the quality of development.

The Sector Plans prepared to date are oriented around the framework established by Kevin Lynch in *The Image of the City*. This framework identifies five key elements that people identify with when interacting with urban landscapes:

- Districts – built form areas that integrate with open spaces and social patterns of life to create areas of geographic and visual reference
- Pathways – key vehicular, pedestrian, and bicycle routes
- Edges – natural and built form boundaries that form spaces
- Nodes – areas where pathways intersect that have a high concentration of activity and/or a high degree of importance with respect to one or a combination of the following: way-finding, social interaction, and aesthetic quality
- Landmarks – important natural, built form and other urban features

Each Sector Plan outlines the characteristics of the Sector and identifies a Sector Vision. An existing conditions inventory and analysis is provided, and is structured around Lynch's framework. Building on this, the Plans develop a detailed set of development guidelines, again based on the five elements identified above. The Sector Plans also provide a set of more detailed site-specific guidelines for individual building or future development sites.



The Arts Quad, looking east toward HUB International.

2.4.7 Other University Policies

PRESERVATION OF UNIVERSITY FACILITIES AND GROUNDS POLICY

This policy states that the University of Alberta recognizes the importance of preserving elements and areas determined to have architectural historic merit or other intrinsic value. Wherever possible, the University endeavours to safeguard, maintain and integrate those elements within the developing landscape.

The Board of Governors delegates to the Vice-President (Facilities and Operations) the responsibility for the preservation of architectural and landscape elements, which are considered on a case-by-case basis, as recommended by the University Architect and with consideration of the Campus Open Space Principles.

The Vice-President ensures a consistent and transparent approach to decisions involving the retention, removal, alteration, re-use, or replacement of historic elements of University architecture and landscape. The Open Space Plan will provide critical support in the on-going implementation of this policy. In turn, this policy establishes direction to preserve the value of the campus landscape, an integral component of the character of the North Campus.

The 89 Avenue promenade is a busy thoroughfare for students.

ENVIRONMENTAL POLICY

The University recognizes that it has a responsibility to its students, staff and faculty in providing an environmentally clean and safe workplace. By virtue of its primary role in education and research, the University also recognizes that it has an obligation to be, and to be seen as, a leader in the protection of the environment, not only through its teaching and research activities, but also by example through its practices in the classrooms, laboratories, and workplace.

The Environmental Policy directs administration and faculties to ensure that appropriate systems and procedures are in place to conduct activities and operations so as to protect the natural environment and the environmental health and welfare of the University's employees and others by meeting or exceeding applicable governmental requirements.

LAND AND BUILDINGS SECURITY POLICY

This policy states that the University will take reasonable steps to provide a safe, comfortable and secure work and learning environment for staff, students, visitors, partners and contract staff. It recognizes that the management of safety and security on an urban campus setting (such as the North Campus) may differ from other University-owned and leased rural lands.

Areas of University lands, buildings and residences that are publicly accessible will be managed in such a way as to promote safety and security, while encouraging use and interaction among staff, students, visitors, partners and contract staff. The public safety aspects of campus life must be addressed through the design of the North Campus landscape.

SIGNAGE POLICY

The Signage Policy outlines the approach the University will take to ensure that the campus maintains a connected and cohesive theme as it pertains to an extensive range of internal signage and external signage that is integrated throughout its campuses and buildings. The University understands that signage is more than simply a building or classroom identification tool or highlighting events on campus. When woven into the fabric of the institution, it can be used to assist in way-finding, highlight the history of the institution, celebrate scholarship and research, and provide the backdrop for both philanthropic and honourific recognition.

The policy directs that a consistent approach be taken when determining the location, scale, design and installation of signage across the institution, and that signage across all campuses contributes to a safe, attractive, well-maintained and interoperable environment. The University has approved guidelines and standards for interior and exterior signage. Considerations to the Open Space Plan will be required when installing signage, in order to complement the campus landscape.

NAMING POLICY

The University recognizes exceptional contributions to the institution, be they philanthropic, honourific or function through the naming of physical entities (e.g. buildings and common grounds) and academic entities. The naming of elements on the campus must be congruent with the overall strategic direction, academic mission, vision and values of the University, and meet established criteria.

Opportunities may exist in the future to undertake a naming program of elements of the Open Space Plan, such as quads and other open spaces, plazas, courtyards, promenades, or other linkages and pathways. Any naming projects should consider a broader consistent approach to the North Campus landscape, and be undertaken in conjunction with the University Signage Policy.

The Campus Landscape

Issues and Opportunities

Section
Three

52 3.1. Configuration and Character
54 3.2. Circulation
54 3.2.1. Pedestrian and Bicycle Circulation
57 3.2.2. Vehicle Circulation and Parking
59 3.2.3. Building Servicing
60 3.3. Vegetation
70 3.4. Campus-Wide Issues and Opportunities
71 3.5. Campus Precincts – Issues and Opportunities
72 3.5.1. River Valley Precinct
74 3.5.2. West Academic Precinct
76 3.5.3. Recreation + Wellness Precinct
78 3.5.4. Central Quad + Central Academic Precinct
80 3.5.5. East Academic Precinct
82 3.5.6. East Campus Village Precinct
84 3.5.7. Lister + Central Services Precinct
86 3.5.8. Health Sciences Precinct

3.1 Configuration and Character

The North Campus is situated on approximately 50 city blocks on a prominent site on the south bank of the North Saskatchewan River. Its location in a largely rural setting in 1908 has been transformed into a highly urbanized context, intermeshed with its surrounding communities, and located centrally within Edmonton.

The campus is largely consolidated, with only a handful of sites under other ownership, primarily the Provincial government (through Alberta Health Services and Alberta Infrastructure), as well as St. Joseph's College and St. Stephen's College. While the area south of 87 Avenue is bisected by roadways like 112 Street, 114 Street, and 87 Avenue, the balance of the campus north of 87 Avenue is largely intact and focused around the academic and institutional activities. The campus has a close relationship with its neighbouring communities, with primarily low-density residential areas present immediately across 110 Street, 87 Avenue, University Avenue, and 116 Street.

The North Campus is walkable, and retains its academic feeling and character. The 100+ years of development offers an interesting mix of building styles and materials, which are complemented by the extensive mature tree canopy throughout the campus. The key elements of the campus character and function are exhibited by its circulation network, its mature and varied vegetation, and its smaller sub-areas that offer different personalities and experiences. The use of brick as a construction material in early buildings, the pedestrian scale and walkability of the campus, and the large number of open space assets also contribute to the character of the site. The sections below address some of the main aspects of the North Campus and its character.

St. Joseph's College, originally built in 1927.

Open space and plaza area at Edmonton Clinic Health Academy.

The North Campus has an abundance of smaller open space areas to serve students, staff, and visitors alike.

The Main Quad retains its prominence on campus, throughout the seasons.

3.2 Circulation

As the landscape of the North Campus has evolved over the past century, so too have the modes of circulation used by people to move within the campus and to access it from the surrounding communities. The early years of the campus were largely focused around pedestrian traffic and bicycles, with limited numbers of vehicles being present. It was not until the post-Second World War period when private vehicles began appearing on the campus in larger numbers, requiring the University to adapt to the resultant demands for parking. The North Campus is relatively self-contained, with only a few roadways bisecting the overall site. A number of access points for vehicles and servicing needs also extend into the campus grounds. Over time, as growth pressures mounted on the limited availability of land for expansion, some surface parking areas were redeveloped for buildings or other University uses.

The University is active in considering Transportation Demand Management practices for the circulation networks on all its campuses, including the North Campus. Today, the North Campus features a range of circulation types and interrelationships between people and vehicles. The network consists of pedestrian/bicycle pathways, shared pedestrian/vehicular spaces, structured and surface vehicle parking areas, and servicing and loading areas. Public transit corridors, bicycle linkages, and emergency access requirements form part of this overall network. While the intent of the plan is to accomodate alternate modes of transportation to facilitate pedestrians and cyclists on the campus, should safety concerns arise, the University is prepared to designate dismount zones as required. The circulation types are discussed below.

3.2.1 Pedestrian and Bicycle Circulation

Providing a historic connection to the early development of the campus, pedestrian linkages form the primary mode of circulation on the North Campus, and connect all parts of the grounds. Major linkages extend throughout, and provide access to open spaces and buildings, as well as to public transit infrastructure and to the surrounding communities. At present, there is no consistent design standard for the major routes. Many of these have been established by following major desire lines that have emerged over time.

Minor pedestrian linkages provide connection to the major linkages, and extend to all destinations throughout the campus. Given the historic evolution of the campus, there is again no consistent design standard to these secondary pathways, resulting in a range of formats, materials, and experiences.

The pedestrian network at present is well-developed and fine-grained, meeting the needs of campus users. New desire lines have emerged over time as the campus has continued to evolve, with new pathways being created in response to new development and changing traffic patterns.

The surface pedestrian network is supplemented in various locations by pedway connections between buildings, providing alternate pathways in the winter months. These are particularly well-used between buildings within the same or shared faculties, facilitating the movement of equipment and other academic materials.

▲ Storage facilities for bicycles can be found throughout the campus.

A major pedestrian route through the Main Quad.

The 88 Avenue Commons is predominantly a pedestrian thoroughfare that accommodates bicycles and limited use of vehicles. Source: University of Alberta Facilities and Operations.

The bicycle network on the North Campus is generally shared with the major and minor pedestrian routes. A portion of 88 Avenue between 110 Street and 111 Street is the only dedicated bikeway facility on the campus. Other dedicated bike lanes and bikeways can be found in various locations in the surrounding communities, including on 116 Street, 112 Street, 110 Street, University Avenue, and Saskatchewan Drive. These linkages provide further connection to the formal shared pedestrian/ bicycle connections in the North Saskatchewan River valley that are part of the city's regional network.

Bicyclists generally utilize roadways, pedestrian routes, sidewalks, and other linkages to get around on the campus. The congested nature of the campus typically restricts bicycle movements and speeds, but conflicts between bicyclists and pedestrians and service vehicles tend to occur.

North Campus circulation network

LEGEND

- Structured public parking
- Underground public parking

Pedestrian and Cyclist

- Marked on road bicycle lane
- Signed on road bicycle lane
- Major pedestrian routes
- Pedestrian node
- Pedestrian and cyclist shared pathway

Vehicular

- Major vehicular circulation
- Vehicular circulation
- Circulation / Entry node

Transit

- LRT line
- Train station
- 1 University station
- 2 Health Sciences / Jubilee station
- Bus routes
- Transit node

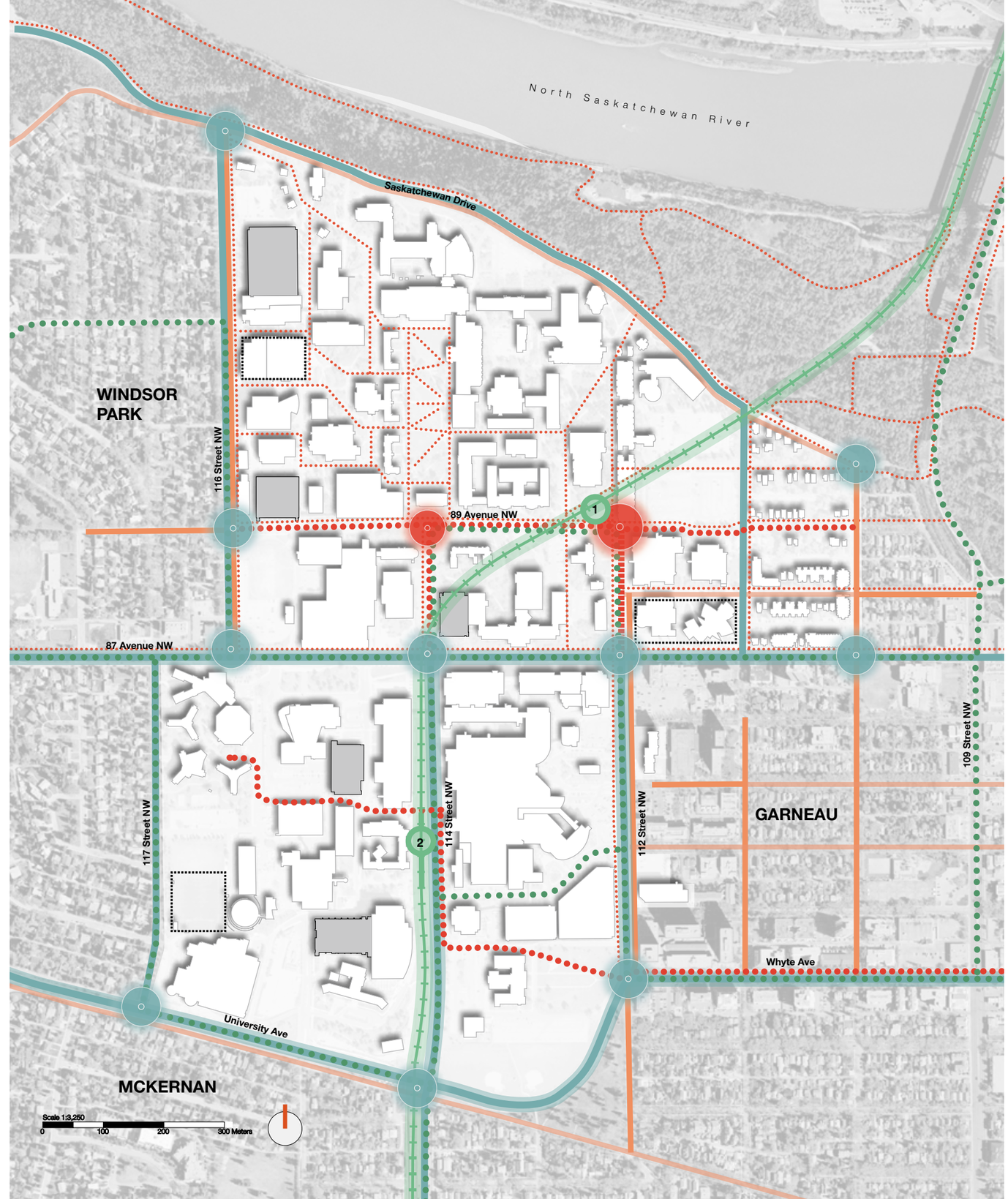


Figure 3

3.2.2 Vehicle Circulation and Parking

The vehicle network on campus is oriented around several major roadways that bisect portions of the North Campus, including the major routes of 87 Avenue, 112 Street, and 114 Street. The site is easily accessed from all quadrants of the city, particularly given its location on the Capital and Metro lines of the Edmonton LRT system. The campus is also well-served by buses from the transit systems of the City of Edmonton, Strathcona County, and the City of St. Albert. The North Campus' location on the LRT and bus network also affords easy connection to the University's other campus locations – South Campus (LRT and bus), Enterprise Square in downtown Edmonton (LRT and bus), and Campus Saint-Jean (City bus and shuttle bus).

In addition to roadway connections, the North Campus is also well-integrated into Edmonton's LRT network, being served by both the University Station (on the 89 Avenue transit loop) and the Health Sciences/Jubilee Station (on 114 Street, just south of 87 Avenue) on the Metro and Capital lines. University Station is the busiest station on the overall LRT network, with over 29,000 passengers per weekday; Health Sciences/Jubilee station also has over 13,000 passengers a day, bringing the total to over 42,000 riders per weekday to the North Campus.

The Health Sciences/Jubilee LRT station brings an additional 13,000 passengers a day to the North Campus.

Parking facilities on North Campus

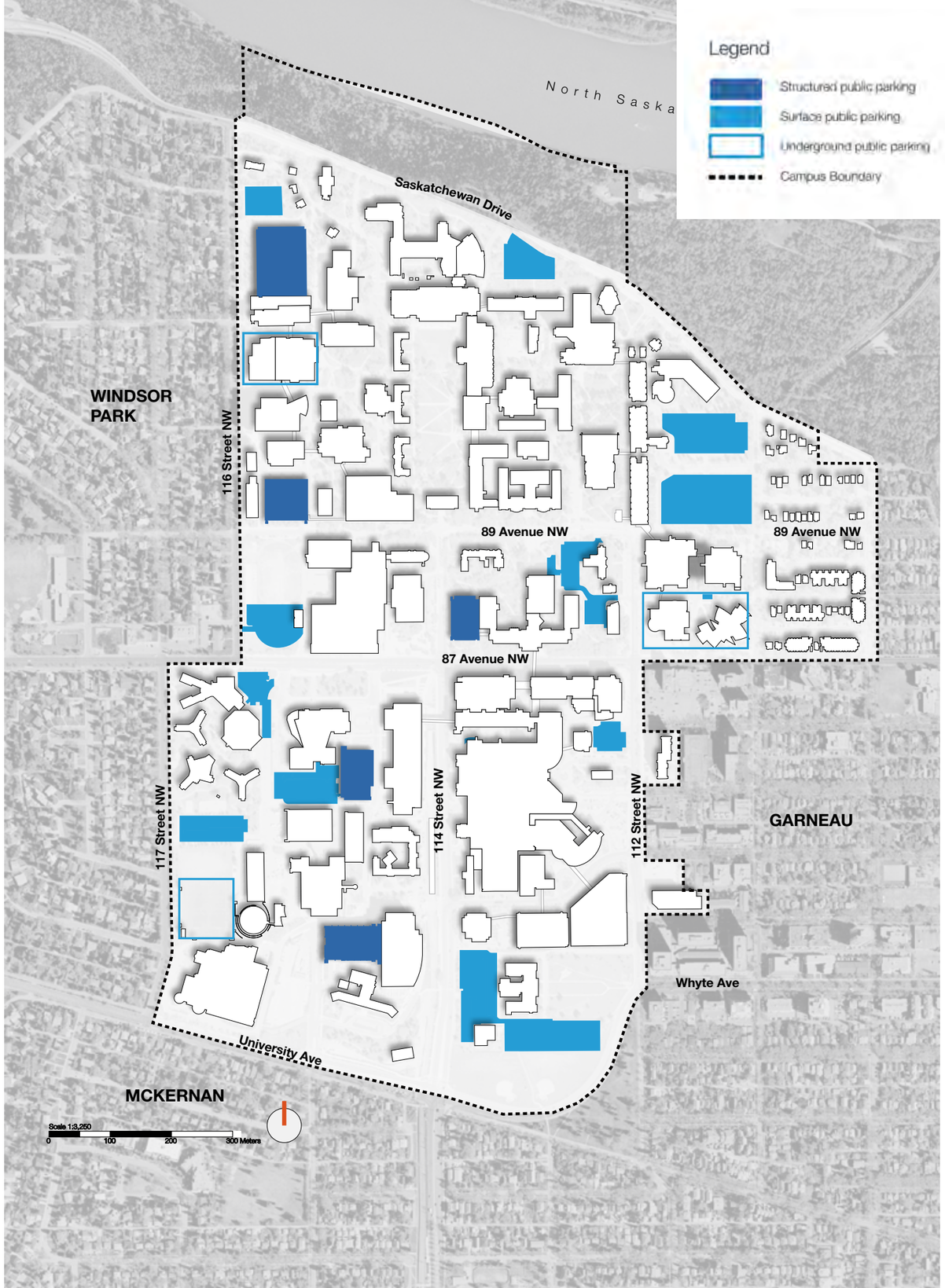
Figure 4

The campus is also served by numerous bus routes to all parts of the city and the wider region. Bus services are provided by Edmonton Transit, Strathcona County Transit, and St. Albert Transit, and students can access the system through the use of the OneCard program. Bus routes are located on University Avenue, 82 Avenue, 83 Avenue, 87 Avenue, 112 Street, 114 Street, 116 Street, and 117 Street. A significant amount of bus traffic to the North Campus utilizes the bus loop on the 89 Avenue alignment.

While the University enjoys strong transit usage, it also provides on-campus parking for students, faculty, staff, and visitors. Parking is provided in a variety of surface and structured above-ground and below-ground configurations, with major facilities at Windsor Car Park, Stadium Car Park, Education Car Park, the Timms Centre for the Arts, and the U/N lot near HUB International. Despite its inventory of vehicle parking, the University has one of the lowest parking spaces-per student ratios in North America, and is committed to reducing this over time. The University was the first post-secondary institution in Canada to introduce a car-sharing program on the North Campus, in partnership with Hertz. The Hertz-on-Demand program allows students, faculty, and staff to rent a vehicle, picking them up and dropping them off at designated sites on the North Campus.

While vehicle and transit traffic is generally kept to the major roadways, and transit vehicles are accommodated on the 89 Avenue bus loop, it is possible for private vehicles to penetrate quite far into the campus grounds to access individual buildings via service routes. Many of these routes are also heavily used by pedestrians, which can cause conflicts between users.

A significant amount of bus traffic utilizes the 89 Avenue corridor.



Service vehicle routes and building connections

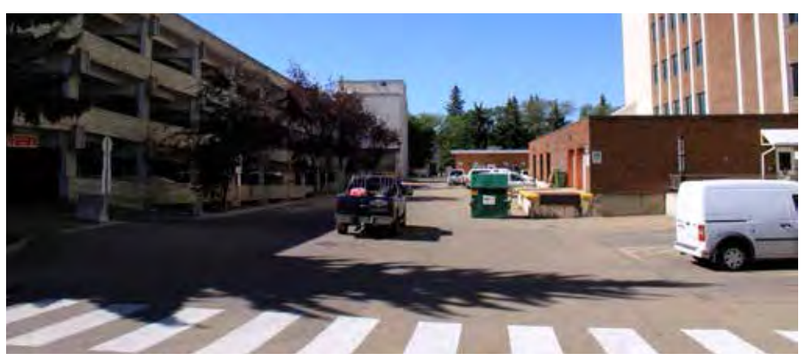
Figure 5

3.2.3 Building Servicing

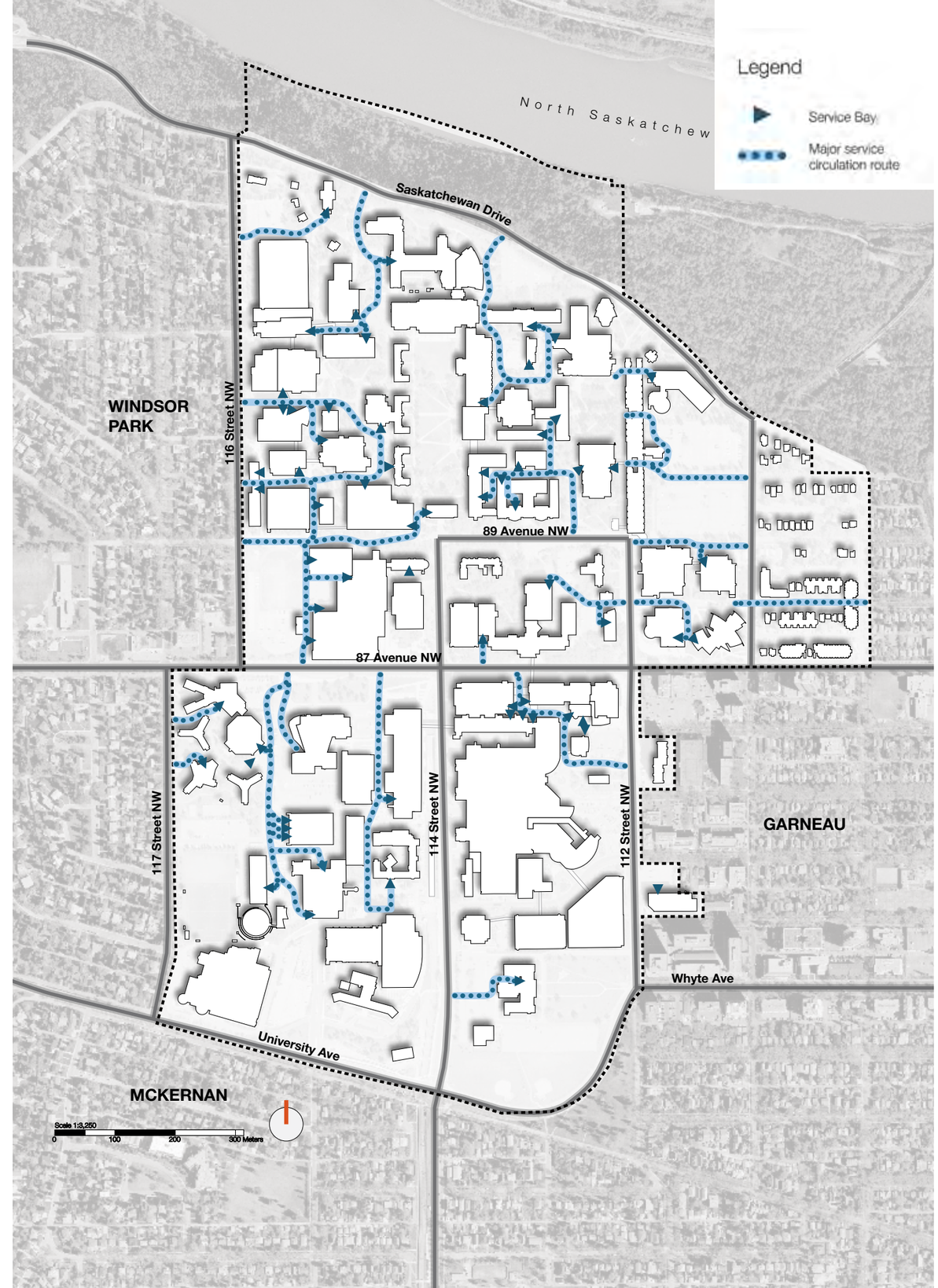
The varied nature of most of the buildings on the North Campus requires a certain amount of building servicing and loading. Buildings that serve the general student and staff population, such as the Students' Union Building, HUB International, and the Central Academic Building, require daily servicing and loading support. The University's significant medical and research activities also require servicing and loading areas, in many cases to accommodate large pieces of equipment or specialized materials. While noisy and often less than aesthetically-pleasing, these facilities are a necessity for keeping the campus safe and operational.

The nature and function of building servicing evolves over time to respond to new development and movement patterns. The University does its best to consolidate servicing and loading facilities to address multiple locations, and is exploring alternatives to continue to reduce the amount of service vehicle traffic conflicts with pedestrians where possible.

The loading dock area at the Students' Union Building can create pedestrian-vehicle conflicts.



Service road access area to the north of Stadium Car Park.



3.3 Vegetation

The vegetation at the University of Alberta is a major defining characteristic of the campus and contributes significantly to the University's overall sense of place and culture. The extensive shrub beds, alleés of Elms and high canopy, treed quads create powerful spaces for campus life. In addition, the vegetation provides important ecological services by regulating microclimates, reducing stormwater runoff, improving air quality, enhancing biodiversity, and providing habitat. There are literally thousands of trees in the campus urban forest, the value of which is in the millions of dollars when assessed by standard tree assessment valuations, but immeasurable in terms of other cultural and environmental benefits.

Established on an open tract of rural fields with mixed aspen, willows, and grain fields, the original North Campus was largely a blank slate at the onset of development. The original 1912 plan for the campus provided direction for the formal arrangement of buildings and green spaces, including early plantings, particularly the memorial alleé of elms along Saskatchewan Drive, which was planted to commemorate soldiers lost in World War One. Foundation plantings, ivy clad buildings, hedgerows, and windbreaks were planted as buildings and outdoor spaces were developed.

In 1948, the highly influential landscape architect Hugh Knowles was hired as the Grounds Superintendent. The campus today is largely a reflection of his dedication to the campus and his explorations of plant hardiness and propagation on the prairies. Knowles' legacy is extremely important in the evolution of the campus landscape and character. He planted extensively, creating large shrub beds, and broad areas of ground covers as well as protected micro sites for specimen trees. Working largely from the original campus master plan, Knowles moved trees, established stockpiles of trees and shrubs, and experimented with new species. His work has provided the campus with a living legacy, rich in unique and mature species.

Of the many thousands of trees on the campus, many are rare and unique. The only black walnut on the campus, which Knowles transplanted from the backyard of the former Tuck Shop in Garneau to the Faculty Club, is considered a very rare tree in Alberta. Two dahurian shagbark birches at the south end of the main quad are the only known specimens in Alberta. Other unique species include (among others): amur corktree, gingko, dropmore linden, eastern white pine, swiss stone pine, bristlecone pine, and prickly spine. Today over 80 species of trees are present on the campus making it one of the most diverse arboreal collections in the province. (Refer to List of Trees on Campus on page 66)

Knowles' trials and development of hardy species for the prairies included the development of several edible pears as well as the commercialization of the Banff Springs bluegrass, the profits from which provided annual scholarships to University of Alberta students for years. His book, *Woody Ornamentals of the Prairies*, published by the Faculty of Extension, is considered the classic reference for prairie gardeners and landscape architects. It is based largely on his work at the University of Alberta as the campus was his laboratory. The rare species and seed sources he established should be considered both a heritage and commercial resource for the University. His legacy should inspire the University to continue tree, shrub and groundcover research and to use the campus as a learning landscape to provide not only beauty, utility and environmental benefits, but also, to extend vegetation knowledge to a broader community.

A Campus Vegetation Management plan that recognizes the need for greater efficiencies is required. The vegetation on campus must evolve to become more sustainable and performative in terms of ecological value and maintenance requirements, while respecting the long and influential horticultural heritage. It is recommended that the species identified in *Woody Ornamentals of the Prairies* be the palette for areas where a horticultural approach is appropriate. However, these species may be replaced or supplemented by native, endemic species in selected areas. Although there is a large inventory of mature trees on the campus at present, many of these trees were planted decades ago, and are approaching the end of their lifespan at the same time. In addition to requiring more effort in terms of maintenance, aging trees can often pose a public safety risk. The tree canopy of the North Campus is one of its most critical assets, and a holistic approach to its health needs to be undertaken. The University should consider the creation of a formal urban forest renewal program which will assess the tree inventory on an annual basis, and identify trees to be removed and how they will be replaced.

While complete transformation of the horticultural species on the campus is not recommended, a more sustainable approach to vegetation management is needed in some areas, in order to both reduce costs, and provide additional environmental benefits. The use of more native species that are suited to the ecological region of the campus is suggested. A list of species endemic to the Central Parkland Natural Sub-region, that are suitable for dry or moist sites, is provided for consideration in future campus landscape projects. Planting palettes can be developed from this list of species, depending on the individual site-type, moisture regime, aspect and desired end land-use. For example, dry-adapted grassland / shrubland species can be planted on sites that are well drained, exposed and south- or west-facing. Alternatively, moist forest species that are found in poorly drained and north-facing areas can be planted on flat sites in the shade of taller buildings. Refer to the tables of selected native planting species for grassland / shrubland and forested areas in the Central Parkland Natural Subregion for consideration of their use on the North Campus. The tables indicate selected species for dry to mesic habitats, and distinguish those that are more suitable for areas of a higher moisture regime.

4
3
4
1
4
2
4
4

MAIN QUAD

Mature elm and spruce create spatial definition in the Main Quad. Planted in the early 1930s, the spruce create a towering separation between the original Halls and the quad. Along the southern end, a canopy of elm, spruce, and pine create intimate spaces.

ARTS | BUSINESS QUAD

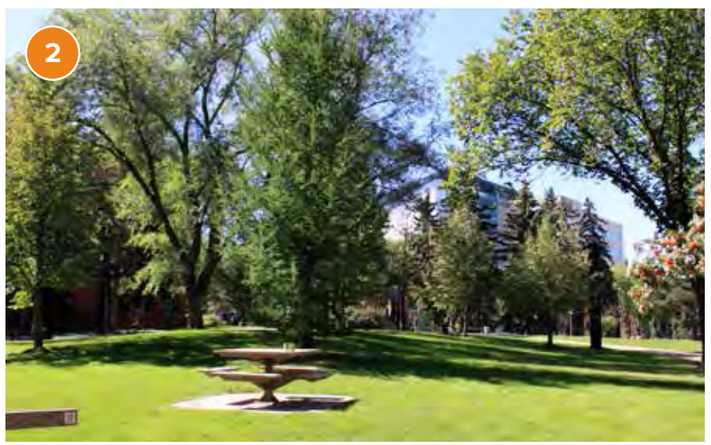
One of the more unique spaces on campus, the Arts | Business Quad was originally known as the Hugh Knowles Courtyard and featured many large shrub beds that have now been replaced by turf. Michael Hough, a well-respected Canadian landscape architect, designed the pine dominated spaces in the centre of the quad in the 1970s. The pine create a comfortable enclosed space but the understorey should be cut back to enhance site lines.

ENGINEERING QUAD

The Engineering Quad is less formal in its organization than the Main Quad, but features a range of vegetation and a mature tree canopy that makes it a popular gathering space. Groupings and rows of spruce, elm, ash, and columnar poplar are planted within large turf patches. The area is characterized by its sloping terrain, and is bisected by service roads, which can pose challenges for pedestrians. Enhancements to existing plantings should aim to create better pedestrian routes, and work with the sloping terrain to create unique spaces.

TREE ALLEES

Throughout the campus, lines of elm trees create a wonderful arching canopy over roadways and paths, providing a landscape feature, even in the winter months. The allee along Saskatchewan Drive was planted in the 1930s and thinned by Hugh Knowles in the 1950s. Many adjacent roadways are lined with mature elms, creating a cohesiveness between the campus and the surrounding neighbourhoods. Additional tree allees should be provided to integrate with those that exist, in order to complete the overall network.



4 TREE ALLEES ON CAMPUS

PRIMARY EXISTING VEGETATION

LARGE TREES

American Elm
Ulmus americana

Scots Pine
Picea sylvestris

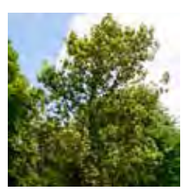
Norway Spruce
Picea abies

Pacific Silver Fir
Abies amabilis

Maidenhair Tree
Ginkgo biloba

White Spruce
Picea glauca

Balsam Fir
Abies balsamea


Balsam Poplar
Populus balsamifera

Amur Corktree
Phellodendron amurense

Western Larch
Larix occidentalis

Little-Leaf Linden
Tilia cordata

Siberian Larch
Larix sibirica

Bur Oak
Quercus macrocarpa

Black Pine
Pinus nigra

Western Hemlock
Tsuga heterophylla

Engelmann Spruce
Picea englemannii

Norway Maple
Acer platanoidea

Western Red Oak
Quercus rubra

American Linden
Tilia americana

Ohio Buckeye
Aesculus glabra

Silver Maple
Acer saccharinum

Douglas Fir
Pseudotsuga menziesii

Manitoba Maple
Acer negundo

Siberian Elm
Ulmus pumila

Black Ash
Fraxinus nigra

INTERMEDIATE TREES

Amur Maple
Acer ginnala

Trembling Aspen
Populus trembuloides

Japanese Silk Lilac
Syringa reticulata

Lodgepole Pine
Pinus controta

Paper Birch
Betula papyrifera

Green Ash
Fraxinus pennsylvanica

White Cedar
Thuja occidentalis

Rocky Mountain Juniper
Juniperus scopulorum

Butternut
Julans cinerea

Silver Birch
Betula pendula

Mountain Ash
Sorbus aucuparia

Blue Spruce
Picea pungens

Siberian Crabapple
Malus baccata

Russian Olive
Elaeagnus agustifolia

Manchurian Cherry
Prunus maackii

Swiss Pine
Pinus cembra

Dahurian Birch
Betula davurica

Hawthorn
Crataegus

False Cypress
Chamaecyparis

Crabapple
Malus domestica

SHRUBS

Nannyberry
Viburnum lentago

Burning Bush
Euonymus alatus

Tartarian Honeysuckle
Lonicera tatarica

Mugo Pine
Pinus mugo

Smooth Sumac
Rhus glabra

Pacific Willow
Salix lucida

Saskatoon
Amelanchier alnifolia

Silver Buffaloberry
Shepherdia argentea

Sea-Buckthorn
Hippophae rhamnoides

Juniper
Juniperus sp.

Other Large Trees

- *Fraxinus pennsylvanica var. subintegerrima*
- *Picea engelmannii*
- *Picea glauca*
- *Pinus banksiana*
- *Pinus contorta var. latifolia*
- *Pinus ponderosa*
- *Pinus strobus*
- *Populus grandidentata*
- *Populus tremula var. erecta*

Other Intermediate Trees

- *Populus deltoides*
- *Prunus virginiana*
- *Prunus nigra*
- *Prunus padus*
- *Pyrus sp.*
- *Rhamnus cathartica*
- *Rhamnus frangula*
- *Crataegus x mordenensis 'Toba'*
- *Sorbus decora*
- *Taxus brevifolia*

EXISTING TREE SPECIES ON CAMPUS

COMMON NAME	SPECIES NAME
Pacific silver fir	*Abies amabilis*
Balsam fir	*Abies balsamea*
Rocky Mountain fir	*Abies lasiocarpa*
Silver maple	*Acer saccharinum*
Amur maple	*Acer ginnala*
Box elder	*Acer negundo*
Norway maple	*Acer platanoides*
Sugar maple	*Acer saccharum*
Maple species	*Acer sp.*
Ohio buckeye	*Aesculus glabra*
Saskatoon serviceberry	*Amelanchier alnifolia*
Dahurian birch	*Betula davurica*
Paper birch	*Betula papyrifera*
Silver birch	*Betula pendula*
Cypress species	*Chamaecyparis sp.*
Hawthorn species	*Crataegus sp.*
Morden hawthorn	*Crataegus mordenensis (toba)*
Silver berry	*Elaeagnus angustifolia*
Spindle tree species	*Euonymus sp.*
White ash	*Fraxinus americana*
Black ash	*Fraxinus nigra*
Green ash	*Fraxinus pennsylvanica*
Green ash	*Fraxinus pennsylvanica var. subintegerrima*

COMMON NAME	SPECIES NAME
Ginkgo biloba	*Gingko biloba*
Common sea-buckthorn	*Hippophae rhamnoides*
Butternut	*Juglans cinerea*
Rocky Mountain juniper	*Juniperus scopulorum*
Juniper species	*Juniperus sp.*
Western larch	*Larix occidentalis*
Siberian larch	*Larix sibirica*
Tatarian honeysuckle	*Lonicera tatarica*
Siberian crabapple	*Malus baccata*
Apple	*Malus domestica*
Apple species	*Malus sp.*
Amur cork tree	*Phellodendron amurense*
Norway spruce	*Picea abies*
Engelmann spruce	*Picea engelmannii*
White spruce	*Picea glauca*
Colorado spruce	*Picea pungens*
Jack pine	*Pinus banksiana*
Swiss pine	*Pinus cembra*
Lodgepole pine	*Pinus contorta*
Shore pine	*Pinus contorta var. latifolia*
Mountain pine	*Pinus mugo*
Black pine	*Pinus nigra*
Ponderosa pine	*Pinus ponderosa*

COMMON NAME	SPECIES NAME
Eastern white pine	*Pinus strobus*
Scots pine	*Pinus sylvestris*
Balsam poplar	*Populus balsamifera*
Eastern cottonwood	*Populus deltoides*
American aspen	*Populus grandidentata*
Swedish upright aspen	*Populus tremula var. erecta*
Aspen	*Populus tremuloides*
Manchurian cherry	*Prunus maackii*
Canada plum	*Prunus nigra*
Hackberry	*Prunus padus*
Pin cherry	*Prunus pennsylvanica*
Cherry	*Prunus sp.*
Chokecherry	*Prunus virginiana*
Douglas fir	*Pseudotsuga menziesii*
Pear species	*Pyrus sp.*
Bur oak	*Quercus macrocarpa*
Northern red oak	*Quercus rubra*
Buckthorn	*Rhamnus cathartica*
Alder buckthorn	*Rhamnus frangula*
Smooth sumac	*Rhus glabra*
Shining willow	*Salix lucida*
Willow species	*Salix sp.*
Silver buffaloberry	*Shepherdia argentea*

COMMON NAME	SPECIES NAME
Elderberry	*Sorbus sp.*
Rowan	*Sorbus aucuparia*
Showy mountain-ash	*Sorbus decora*
Lilac species	*Syringa sp.*
Pacific yew	*Taxis brevifolia*
White cedar	*Thuja occidentalis*
American basswood	*Tilia americana*
Small-leaved lime	*Tilia cordata*
Western hemlock	*Tsuga heterophylla*
American elm	*Ulmus americana*
Siberian elm	*Ulmus pumila*
Nannyberry	*Viburnum lentago*

SELECTED NATIVE PLANTING SPECIES FOR GRASSLAND / SHRUBLAND AREAS

SHRUBS

COMMON NAME	SPECIES NAME
DRY GRASS/SHRUBLAND	
creeping juniper	*Juniperus horizontalis*
silverberry	*Eleagnus commutata*
rose	*Rosa spp*
chokecherry	*Prunus virginiana*
raspberry	*Rubus ideaus*
SPECIFIC TO MOIST AREAS	
dogwood	*Cornus stolonifera*
sandbar willow	*Salix exigua*
yellow willow	*Salix lutea*
flat-leaved willow	*Salix planifolia*
shining willow	*Salix lucida*
beaked willow	*Salix bebbiana*
river alder	*Alnus tenuifolia*
high bush cranberry	*Viburnum opulus*
water birch	*Betula occidentalis*

FORBS

COMMON NAME	SPECIES NAME
common annual sunflower	*Helianthus annuus*
golden aster	*Heterotheca villosa*
golden bean	*Thermopsis rhombifolia*
low goldenrod	*Solidago missouriensis*
pasture sagewort	*Artemesia frigida*
everlastings	*Antennaria sp*
three-flowered avens	*Geum triflorum*
harebell	*Campanula rotundifolia*

GRASSES

COMMON NAME	SPECIES NAME
hay sedge	*Carex siccata*
june grass	*Koeleria macrantha*
needle and thread	*Stipa comata*
sand dropseed	*Sporobolus cryptandrus*
sand grass	*Calamovilfa longifolia*
blue grama	*Bouteloua gracillis*
Hookers oatgrass	*Helictotrichon hookeri*
plains rough fescue	*Festuca hallii*
rocky mountain fescue	*Festuca saximontana*
western porcupine grass	*Stipa curtiseta*

SELECTED NATIVE SPECIES FOR FORESTED AREAS

TREES

COMMON NAME	SPECIES NAME
MESIC FOREST	
aspen	*Populus tremuloides*
SPECIFIC TO MOIST FOREST	
balsam poplar	*Populus balsamifera*
white spruce	*Picea glauca*

SHRUBS

COMMON NAME	SPECIES NAME
MESIC FOREST	
chokecherry	*Prunus virginiana*
raspberry	*Rubus ideaus*
twining honeysuckle	*Lonicera dioica*
saskatoon	*Amelanchier alnifolia*
bearberry	*Arctostaphylos uvi-ursi*
juniper	*Juniperus horizontalis*
snowberry	*Symphoricarpos occidentalis/albus*
rose	*Rosa spp*
northern gooseberry	*Ribes oxyacanthoides*
SPECIFIC TO MOIST FOREST	
high bush cranberry	*Viburnum opulus*
lowbush cranberry	*Viburnum edule*
Canada buffaloberry	*Shepherdia canadensis*

FORBS

COMMON NAME	SPECIES NAME
MESIC FOREST	
common yarrow	*Achillea millefolium*
cream-coloured vetchling	*Lathyrus ochroleucus*
golden bean	*Thermopsis rhombifolia*
low goldenrod	*Solidago missouriensis*
northern bedstraw	*Galium boreale*
Lindley's aster	*Aster ciliolatus*
star-slowered Solomon's seal	*Smilacina stellata*
veiny meadow rue	*Thalictrum venulosum*
wild strawberry	*Fragaria virginiana*
wild vetch	*Vicia americana*
wild sarsaparilla	*Aralia nudicaulis*
SPECIFIC TO MOIST FOREST	
Western Canada violet	*Viola canadensis*
common horsetail	*Equisetum arvense*

GRASSES

COMMON NAME	SPECIES NAME
MESIC FOREST	
white mountain rice grass	*Oryzopsis asperifolia*
sedge	*Carex spp*
slender wheat grass	*Agropyron trachycaulum*
sand grass	*Calamovilfa longifolia*
purple oat grass	*Schizachne purpurescens*
rocky mountain fescue	*Festuca saximontana*
plains rough fescue	*Festuca hallii*
june grass	*Koeleria macrantha*
SPECIFIC TO MOIST FOREST	
bluejoint	*Calamagrostis canadensis*
northern wheat grass	*Agropyron dasystachyum*

3.4 Campus-Wide Issues and Opportunities

The existing conditions analysis and assessment of the North Campus, in addition to the engagement activities undertaken, identified a number of issues and opportunities that are present with the open space environment of the site. These elements are applicable campus-wide, and are not necessarily specific to certain Precincts or locations. They provide an overview of what the main concerns are for the North Campus, and what ways an enhanced open space network can contribute to an improved landscape experience.

Campus-wide issues and opportunities:

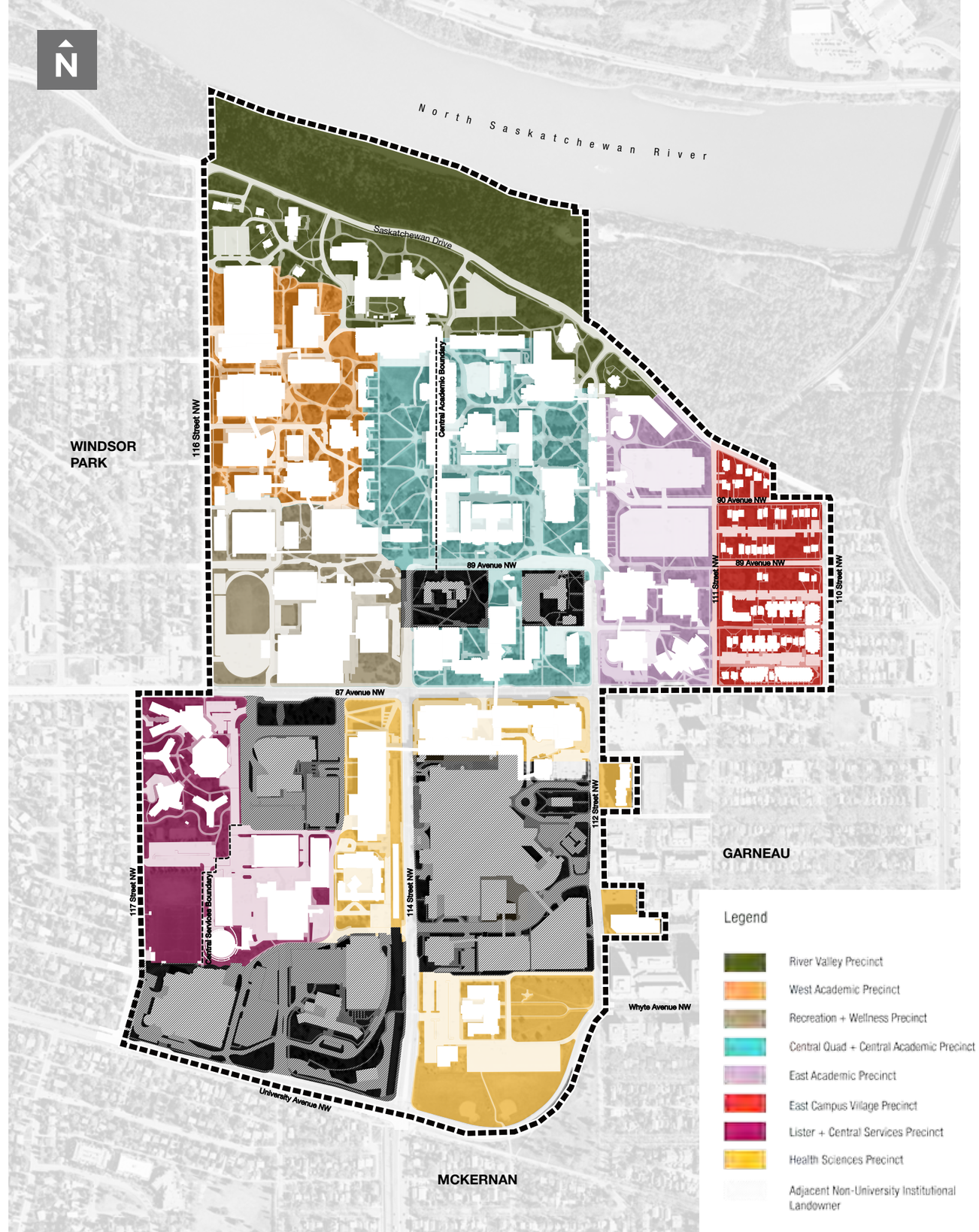
- Undeveloped or underutilized open space sites
- Connections between open spaces
- Need for gathering places (or "outdoor rooms") for students, faculty/staff, and visitors throughout the campus
- Connections to and interface with surrounding communities
- Cohesiveness of campus landscape
- Pedestrian/bicycle conflicts with service vehicles and other motorized traffic
- Interface between buildings and adjacent landscape
- Water features (some of which contain fish species) are popular draw for campus users
- Maintenance and operational considerations and capacity
- Sustainable development approaches
- Retention and enhancement of mature tree canopy
- Respecting the history of the campus
- Four-season usage of the campus
- Prioritizing pedestrians as the main users of inter-campus connections and access routes
- Improved wayfinding and addressing
- Overall personality and campus identity
- Elevation of the University brand
- A high-quality campus experience

The 89 Avenue promenade serves a variety of circulation needs for the North Campus.

3.5 Campus Precincts – Issues and Opportunities

Over the past century, the North Campus has seen many different development periods, and an evolution in how open space has been provided and enjoyed on the site. As the campus has matured, areas of distinct character have emerged, based on building design, open space dynamics, and academic use. The existing landscape character is one of the key defining elements of the North Campus, and the Open Space Plan will include design goals and strategies that will preserve and enhance this character.

In analyzing the existing conditions of the campus, the Open Space Plan has identified these character areas as Precincts, which assist in developing proposed open spaces, connections, and design elements for the North Campus. The detailed issues and opportunities analysis that follows has been undertaken based on these Precincts. It is important to note that the Precincts identified do not necessarily conform to the boundaries of the various Sector Plans that the University utilizes for campus planning.



North Campus Precincts

Figure 6

3.5.1 River Valley Precinct

The River Valley Precinct is located at the extreme north end of the North Campus, and is focused around the Saskatchewan Drive corridor, which runs along the top of the bank of the North Saskatchewan River. Linear in nature, the Precinct extends from 116 Street east to Rutherford House. The area features many mature trees, and is quieter than many parts of the campus. Historic roots of the campus are located here, with four of the remaining Ring Houses that housed the first President and University staff still in their original locations. Alumni House, Faculty Club, Biological Sciences, and the Tory Lecture Theatre are other main buildings located in the area. The Saskatchewan Drive corridor is popular for walkers, runners, and bicyclists, with a multi-use trail located on the north side of the road, connecting into the network of trails in the river valley. Outstanding views of the Provincial Legislature and Edmonton's downtown can be seen from the area; conversely, this Precinct and the adjacent buildings to the south (such as the H.M. Tory Building) are highly prominent when viewed from the north side of the river.

Core issues identified in this Precinct include:

- A major entrance gateway into North Campus, but the area lacks visual impact and sense of arrival
- Open space and turf areas feature mature trees but lack function and seating opportunities to draw people and activities
- Pedestrian/bicycle and service vehicle conflict areas are present in several locations
- Lack of pedestrian linkages across Saskatchewan Drive to City of Edmonton multi-use trail system and river valley amenity
- Large surface parking lot to the north of Windsor Car Park interrupts pedestrian linkages to 116 Street
- Poor street-level interface between Faculty Club and Saskatchewan Drive

Major opportunities identified in this Precinct include:

- Open space along Saskatchewan Drive could be enhanced to provide better amenities (seating, public art, stretch zone for runners) for gatherings or other activities
- Improved pedestrian linkages across Saskatchewan Drive to provide better connection to multi-use trail, provided in a safe manner
- Enhance integration of Ring Houses with surrounding open space to create a more public feel to the buildings
- Enhance gateway to create visual interest and dramatic entrance to North Campus when arriving from the west along Saskatchewan Drive
- Formal pedestrian connection from 116 Street into campus to reduce vehicle-pedestrian conflicts
- Additional signage and information panels for Geoscience Garden along Saskatchewan Drive to better engage public
- Enhancements to pedestrian environment along south side of Saskatchewan Drive to create more formal promenade

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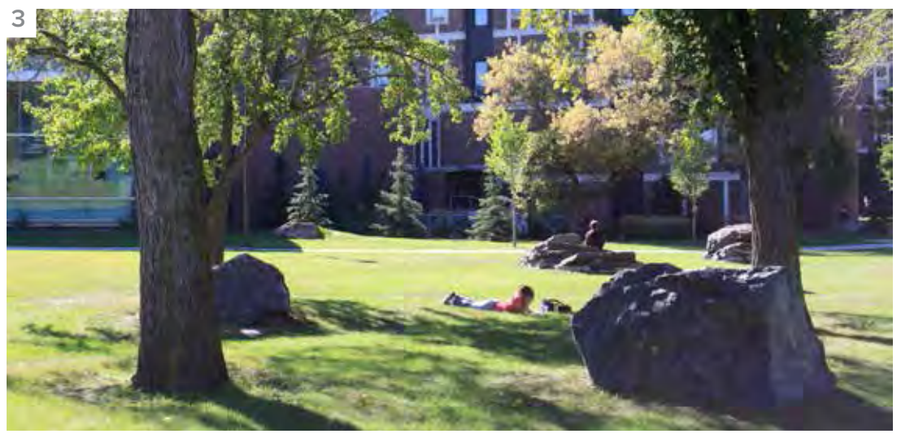

Issues and Opportunities plan for River Valley Precinct

Figure 7

Legend

- Building
- Elevated Walkway
- Roadway
- Pathway
- Surface parking
- Green space
- Precinct boundary
- Service vehicle parking
- Forest Reserve
- Service Bay
- Walking Trail
- Major pedestrian circulation route
- Major service circulation route
- (PA) Existing public art
- Muster point
- (E) Entrance sign
- Geoscience garden rock

Opportunities

- Key opportunity
- Photo view angle
- Gateway condition
- Potential pedestrian linkage

Issues

- Pedestrian/service vehicle conflict corridor
- Pedestrian/service vehicle conflict node
- Pedestrian Safety Concern
- Desire line

3.5.2 West Academic Precinct

This Precinct is located on the western edge of the North Campus, bounded by 116 Street, and presents a direct interface with the adjacent Windsor Park neighbourhood. Almost all of the Faculty of Engineering academic, research, and support space is located here, as well as University administration uses. Much of the development in this area has occurred since the 1960s, and continues to the present, with the construction of the Innovation Centre for Engineering as the most recent project. The Precinct is one of the densest areas on the North Campus, and has significant student and staff traffic patterns. Many of the buildings in this area are five storeys or greater in height, creating a very urban feel. The Engineering Quad provides a central open space feature, and there have been significant infrastructure improvements to the public realm (seating areas, lighting, waste receptacles, signage) in recent years by the Faculty of Engineering. Pedestrian linkages in the area are often shared with service vehicles, resulting in the potential for conflicts between users. The original three residence halls (Athabasca, Assiniboia, and Pembina) present an historical backdrop to the east edge of the Precinct, with direct connections to the Main Quad.

Core issues identified in this Precinct include:

- Several nodes and corridors where conflicts between pedestrians, bicyclists, and service vehicles occur, particularly in the southern portion of the area near the Students' Union Building, the Agriculture/Forestry Centre, the General Services Building, and the Natural Resources Engineering Facility
- Recent streetscape improvements for the Faculty of Engineering are of high quality and are a positive addition, yet are inconsistent with similar elements on the rest of the campus
- A large undeveloped site to the west of Centennial Centre for Interdisciplinary Science is underutilized
- Sidewalk condition on east side of 116 Street is not consistent, and in some cases, does not provide a comfortable walking environment
- Pedway linkages between buildings shift pedestrian traffic from the ground level, particularly in winter months. Building entrance connections at ground level need improvement

Major opportunities identified in this Precinct include:

- Investigate alternate means to service locations on the north side of the Students' Union Building and the north side of the Natural Resources Engineering Facility to reduce ongoing pedestrian/bicycle and service vehicle conflicts and create more inviting open space corridors
- Enhancements to designated corridors to create better pedestrian/bicycle pathways to reduce conflicts with service vehicles, and give priority to non-motorized traffic
- Redevelopment of vacant site to the west of the Centennial Centre for Interdisciplinary Science that facilitates uninterrupted north/south pedestrian movements
- Explore potential for enhancements to Engineering Quad to create additional seating areas or gathering spaces, while not precluding potential enhancements to buildings in the area
- Improved pedestrian environment on east side of 116 Street from Saskatchewan Drive to 87 Avenue
- Enhancements to north/south pedestrian corridor running from the east side of Windsor Car Park south to the east side of Stadium Car Park

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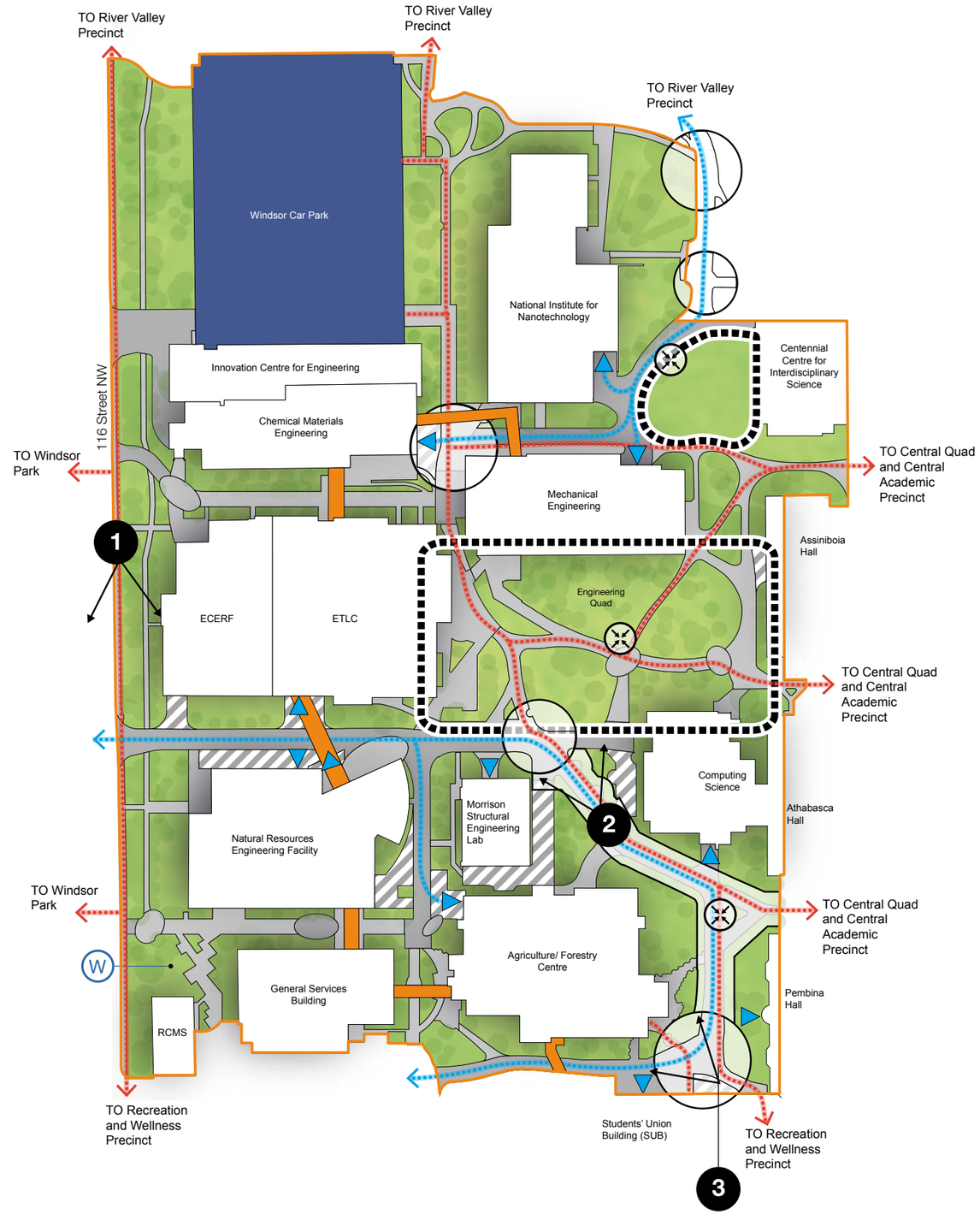
Issues and Opportunities plan for West Academic Precinct

Figure 8



Legend

- Building
- Elevated walkway
- Structured parking
- Roadway
- Pathway
- Surface parking
- Green space
- Precinct boundary
- Service vehicle parking
- Service bay
- Major pedestrian circulation route
- Major service circulation route
- Water feature
- Muster point

Opportunities

- Key opportunity
- Photo view angle
- Potential pedestrian linkage

Issues

- Pedestrian/service vehicle conflict corridor
- Pedestrian/service vehicle conflict node

3.5.3 Recreation + Wellness Precinct

The Recreation + Wellness Precinct is located to the south of the West Academic Precinct, and is bounded by 116 Street to the west, 87 Avenue to the south, and 114 Street to the east. Significant buildings in this area include the Students' Union Building, University Hall, Clare Drake Arena, the Van Vliet Centre, the Universiade Pavilion (Butterdome), and the new Physical Activity and Wellness (PAW) Centre, currently under construction. The former Varsity Field, the original outdoor sports field for the campus for decades, is now unused apart from some surface parking. A review of opportunities for the re-use of this key site is presently underway. The 89 Avenue corridor provides a major entry point into the campus from 116 Street, leading to the east into the heart of the campus. Enhancements to the pedestrian realm along 89 Avenue between the Students' Union Building and the Van Vliet Centre are now underway. The 87 Avenue corridor to the south is a busy four-lane arterial roadway, and 114 Street is a major pedestrian, vehicle, and public transit entry point to the campus.

Core issues identified in this Precinct include:

- Conflicts between pedestrians/cyclists and service vehicles along 89 Avenue corridor, area to the north and east of Stadium Car Park, and southeastern corner of Students' Union Building
- Narrow corridor and obstructed sight lines create unsafe environment for pedestrians at southeast corner of Students' Union Building due to service vehicle access
- Service vehicle and DATS bus entrance on west side of Clare Drake Arena is very narrow (see image 3) and results in conflicts with pedestrians
- Current use of Varsity Field site could be improved and offers opportunities
- Poorly-marked service vehicle access/egress points on 87 Avenue and 89 Avenue along busy pedestrian corridors
- Pedestrian and vehicle conflict points along west side of 114 Street, north of 87 Avenue, at access points to surface parking area
- Few formal open spaces or seating areas

Major opportunities identified in this Precinct include:

- Enhancements to 89 Avenue corridor to create pedestrian/bicycle pathway separating service vehicle traffic
- Better manage service vehicle access to southeast corner of the Students' Union Building to improve pedestrian/bicycle safety
- Creation of dedicated pedestrian/bicycle pathway to the north and east of Stadium Car Park to control vehicle traffic
- Further discussions regarding potential for redevelopment of Varsity Field site to act as amenity for University and surrounding community
- Enhancements to service vehicle access on 87 Avenue to create safer interaction point with pedestrians/bicycles
- Enhance DATS access on west side of Clare Drake Arena by widening the space to improve pedestrian/bicycle environment
- Continuation of improved pedestrian environment on east side of 116 Street from Saskatchewan Drive to 87 Avenue

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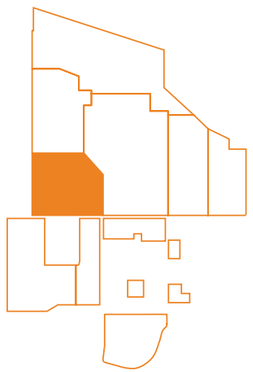
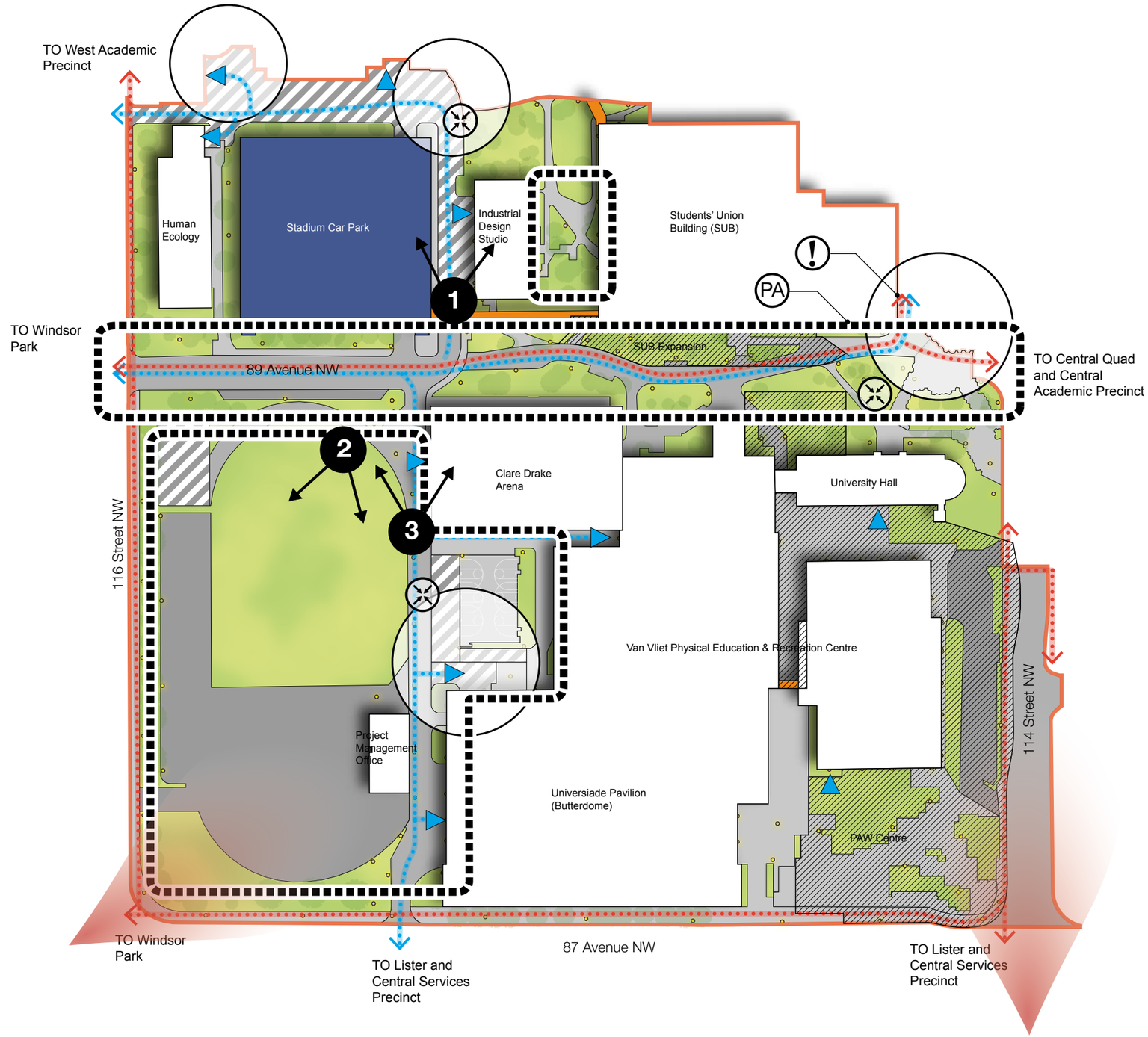
Issues and Opportunities plan for Recreation + Wellness Precinct

Figure 9





Legend

- Building
- Elevated walkway
- Structured parking
- New construction
- Roadway
- Pathway
- Surface parking
- Green space
- Precinct boundary
- Service vehicle parking
- Service bay
- Major pedestrian circulation route
- Major service circulation route
- Public art
- Muster point

Opportunities

- Key opportunity
- Photo view angle
- Gateway condition

Issues

- Pedestrian/service vehicle conflict node
- Pedestrian safety concern

3.5.4 Central Quad + Central Academic Precinct

In many ways, the Central Quad and Central Academic Precinct is the true heart of the University. This Precinct features the vast majority of the original buildings that were first developed in the 1910s and 1920s, such as Athabasca, Assiniboia, and Pembina Halls, the Arts Building, the Dentistry/Pharmacy Building, the South Lab, the Power Plant, St. Stephen's College, and St. Joseph's College. The Main Quad, the central feature of the 1912 Block Plan, still remains as the most important feature of the North Campus, and retains its classic academic feel. Other significant buildings in the area include Cameron Library, Earth Sciences, the Centennial Centre for Interdisciplinary Science, the Gunning/Lemieux Chemistry Centre, the Central and South Academic Buildings, Education North and South, Rutherford Library, the H.M Tory Building, and the Alberta School of Business. The 87 Avenue corridor provides a hard edge to the south boundary, while the HUB International building provides a physical and visual barrier to the east. Open space has always been a key feature of this part of the North Campus, with the Main Quad and the Arts/Business Quad being the dominant spaces. This Precinct also features other open space areas along the 89 Avenue promenade, courtyard areas on the north side of the Education complex, and the area to the south of the Rutherford Library. Many of the original trees planted as the campus first developed can be found here, providing a strong urban canopy character throughout the area. The public transit and vehicle access corridor along 89 Avenue bisects the Precinct; however, the design of the avenue gives priority to pedestrians and bicyclists over vehicle traffic. The 112 Street and 114 Street entrances from 87 Avenue are major entry points to the campus, for both pedestrians and vehicles. University Station, the busiest station on the Edmonton LRT network, is located on 89 Avenue, just to the west of HUB International.

Core issues identified in this Precinct include:

- Consolidated nature of Precinct results in several locations of conflict between pedestrians/bicyclists and service vehicles
- Linkages through ground level of HUB International create potentially unsafe environments for pedestrians
- Linkages at south end of the Central Academic Building and the west side of Cameron Library create potentially unsafe environments for pedestrians
- Desire lines on existing turf through the Main Quad highlight inadequate hard-surface pedestrian linkages
- Poor interface of University Station near HUB International and adjacent bus loop on 89 Avenue creates cramped situation at busy pedestrian node
- Pedway and entrance structure at south end of HUB International disrupts view corridor along 89 Avenue to the east and west, and compromises pedestrian/bicycle flow

Major opportunities identified in this Precinct include:

- Installation of new pathways to reflect pedestrian desire lines through Main Quad
- Enhancements to Main Quad at south end to create Celebration Plaza and improve public entrance to the Quad
- More formal connection to Main Quad from the east to create a focused and safer pedestrian environment between the Central Academic Building and the South Academic Building
- Potential for outdoor amphitheatre at north end of Main Quad
- Upgrades to lighting and hardscape to improve pedestrian safety concerns under HUB International and near the Central Academic Building
- Enhancements the corridor between Triffo Hall and the North Power Plant to create focused gathering place
- Undertake Alumni Walk development on west and east sides of Main Quad
- Consider opportunities for the addition of water features on the Main Quad to provide focal points and year-round amenity space
- Improvements to 89 Avenue corridor to better accommodate pedestrian and bicycle traffic, in light of reduced bus traffic through the area, in consultation with the City of Edmonton and Edmonton Transit
- Enhancement of pedway and entrance connection between HUB International and the Fine Arts Building to improve viewlines and pedestrian movement along 89 Avenue
- Development of integrated plaza space between Dentistry/Pharmacy and Education North to create a focal point

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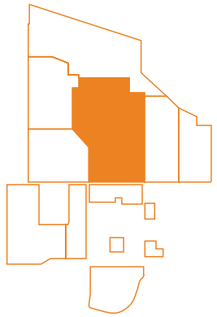
Issues and Opportunities plan for Central Quad + Central Academic Precinct

Figure 10



Legend

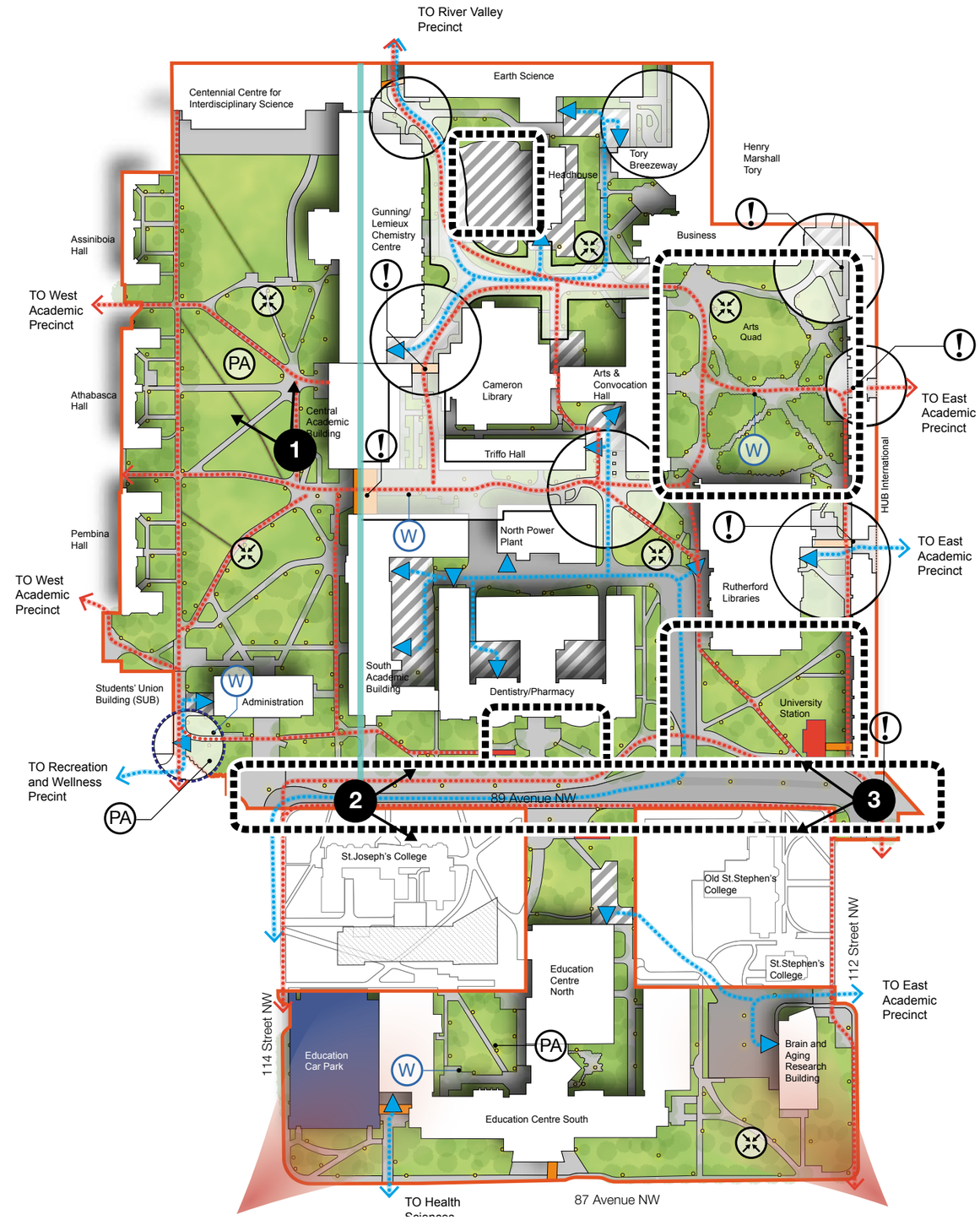
- Building
- Elevated walkway
- Structured parking
- LRT entrance / exit portal
- Roadway
- Pathway
- Surface parking
- Green space
- Precinct boundary
- Service vehicle parking
- Service bay
- Major pedestrian circulation route
- Major service circulation route
- Sub-area Boundary
- Public art
- Muster point
- Water feature

Opportunities

- Key opportunity
- Photo view angle
- Gateway condition
- Potential pedestrian linkage

Issues

- Pedestrian/service vehicle conflict corridor
- Pedestrian/service vehicle conflict node
- Pedestrian Safety Concern
- Desire line



3.5.5 East Academic Precinct

The East Academic Precinct is located east of HUB International and 112 Street, and is bounded to the north by Saskatchewan Drive, to the east by 111 Street, and to the south by 87 Avenue. Development in this part of the North Campus has been much more recent, with the Law Centre opening in 1971, HUB International and the Humanities Centre in 1972, Fine Arts in 1973, the Timms Centre in 1994, and the Telus Centre in 2000. As with the Central Quad + Central Academic Precinct, HUB International creates a physical and visual barrier to the balance of the campus to the west. Open space assets are limited in the area, with a turf area with a water feature on the south side of the Humanities Centre, and a courtyard space between Fine Arts and Law. A plaza area associated with the Timms Centre at the northeast corner of 87 Avenue and 112 Street is underutilized. Major pedestrian corridors extend through the area along 88 Avenue and 89 Avenue. The 111 Street thoroughfare is a busy roadway that provides access to the large surface parking area to the east of HUB International. This parking area has been identified as a major academic redevelopment area under the Sector 7 Plan, including a large open space plaza feature.

Core issues identified in this Precinct include:

- HUB International presents a visual and physical barrier between the Central Quad + Central Academic Precinct to the west
- Limited pedestrian/bicycle access points through HUB International at the ground level are shared with vehicles, and are narrow and dimly lit, resulting in an uninviting, and potentially unsafe pedestrian environment
- 88 Avenue and 89 Avenue corridors through the area present ongoing conflicts between pedestrians/cyclists and service vehicles
- Existing open spaces between the Fine Arts Building and the Law Centre and between the Timms Centre and the Telus Centre are underutilized
- Pedestrian crossing at 88 Avenue on 111 Street is not well-marked or articulated
- The 89 Avenue corridor is out of east-west alignment with the corridor west of HUB International and east of 111 Street, and the view corridor is interrupted by the stairway addition to the pedway on the south end of HUB
- Large surface parking areas east of HUB International as an interim use awaiting future redevelopment underutilize the land and offer little in the way of an enhanced landscape
- HUB International service dock is busy, noisy, and unsightly, particularly when considering its location adjacent to a University daycare centre
- Plaza area at Timms Centre for the Arts on 87 Avenue is underutilized

Major opportunities identified in this Precinct include:

- Relocation of existing parking underground through the redevelopment of the U and N lots east of HUB International (as identified in the Sector 7 Plan) presents major opportunity to introduce additional open space amenities and improve pedestrian/bicycle connectivity
- Consideration of surface and lighting enhancements to ground-level access points through HUB International to improve pedestrian/bicycle environment
- Additional screening or alterations to main HUB International service dock to improve surrounding landscape and provide buffering from pedestrians/cyclists and the neighbouring daycare
- Realignment of 89 Avenue corridor to be in line with adjacent alignments to east and west and consideration for removal of staircase entry and pedway at south end of HUB International
- Better articulation of pedestrian corridor along 89 Avenue to better distinguish pedestrian/bicycle realm from service vehicle access
- Improvements to courtyard area between the Fine Arts Building and the Law Centre to create a formal gathering space and art display area
- Upgrades to intersection at 88 Avenue and 111 Street to better support safe pedestrian/bicycle movements across 111 Street
- Enhancements to surface entrance area on east side of HUB International to create a pedestrian-friendly environment
- Enhancements to Timms Centre plaza to create an improved gathering space

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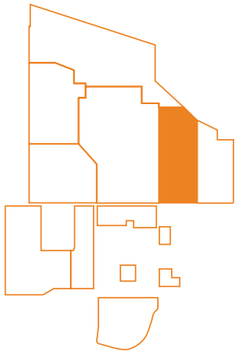
Issues and Opportunities plan for East Academic Precinct

Figure 11



Legend

- Building
- Elevated walkway
- Roadway
- Pathway
- Surface parking
- Green space
- Outdoor daycare play area
- Precinct boundary
- Service vehicle parking
- Service bay
- Major pedestrian circulation route
- Major service circulation route
- Existing public art
- Muster point
- Underground parking entrance
- Water feature

Opportunities

- Key opportunity
- Photo view angle
- Gateway condition
- Potential pedestrian linkage

Issues

- Pedestrian/service vehicle conflict corridor
- Pedestrian/service vehicle conflict node
- Pedestrian safety concern

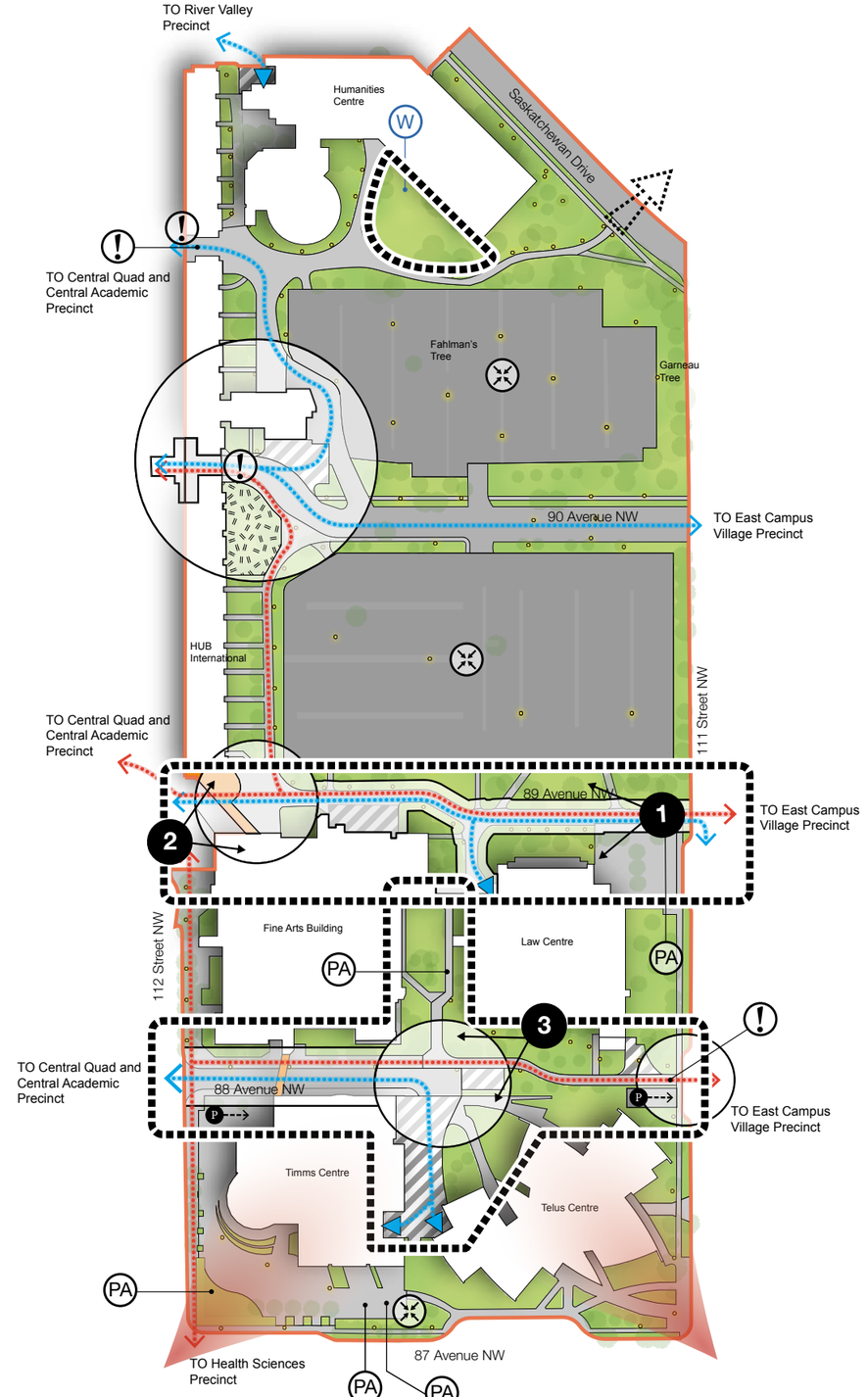


Figure 11: Issues and Opportunities plan for East Academic Precinct.

3.5.6 East Campus Village Precinct

The East Campus Village Precinct has a distinctly different character from the balance of the North Campus. As a remnant area of the Garneau community that was acquired by the University in the 1960s, the area retains its residential street cross-section, and several actual former residences. Many of these buildings are used for student residential purposes, or as academic office space. The original boulevard sidewalk and mature tree canopy from the area's initial development in the 1920s is still a strong characteristic of the public realm of the Precinct. It is bounded by 111 Street to the west, Saskatchewan Drive to the north, 110 Street to the east, and 87 Avenue to the south. The residential feel of the area provides a gradual transition to the balance of the Garneau community to the east. Much of the southern part of the Precinct has been redeveloped with newer student residence buildings, including International House, new graduate student residences along 87 Avenue and 110 Street, and the most recent Tamarack and Pinecrest Houses on 89 Avenue. There is little formal open space in the area, with much of this type of space existing as front and rear yard areas from the former residences. The 88 Avenue Commons promenade has reinforced this corridor as a pedestrian space, with limited access for service vehicles. The Sector 8 Plan has identified this area for additional development to facilitate more student accommodation, which will add to the area's character as a residential community.

Core issues identified in this Precinct include:

- Sidewalk configuration near high volume of vehicle traffic on west side of 111 Street creates undesirable pedestrian environment
- Poorly marked pedestrian crossings over 111 Street at 88 Avenue, 89 Avenue, and 90 Avenue create unfriendly intersections for users
- Lack of formal or developed open space in area despite large numbers of student residents (to be addressed by Sector 8 Plan)
- Existing mature tree canopy contributes significantly to Precinct character and should be maintained
- Issues with service vehicle/bicycle and pedestrian coexistence on 88 Avenue Commons

Major opportunities identified in this Precinct include:

- Enhanced pedestrian connections on 111 Street included with new developments (wider sidewalks, boulevard trees, patios, etc.) would make the corridor more amenable to place-making
- Completion of improvements to 88 Avenue Commons corridor to further enhance pedestrian/bicycle connection
- Enhanced crossings of 111 Street at 88 Avenue, 89 Avenue, and 90 Avenue to slow traffic and give priority to pedestrians and cyclists
- Implementation of new open space sites and Community Garden to provide amenities for residents (per Sector 8 Plan)
- Partnership with City and Garneau community to explore shared-use opportunities and enhancements to Adair Park site
- Closure of 89 Avenue to vehicle traffic and redevelopment to pedestrian-oriented environment respecting existing boulevard tree configuration

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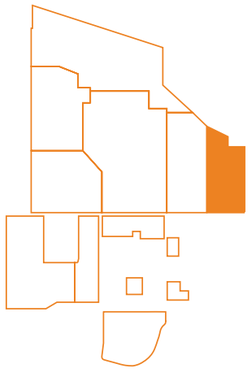
Issues and Opportunities plan for East Campus Village Precinct

Figure 12



Legend

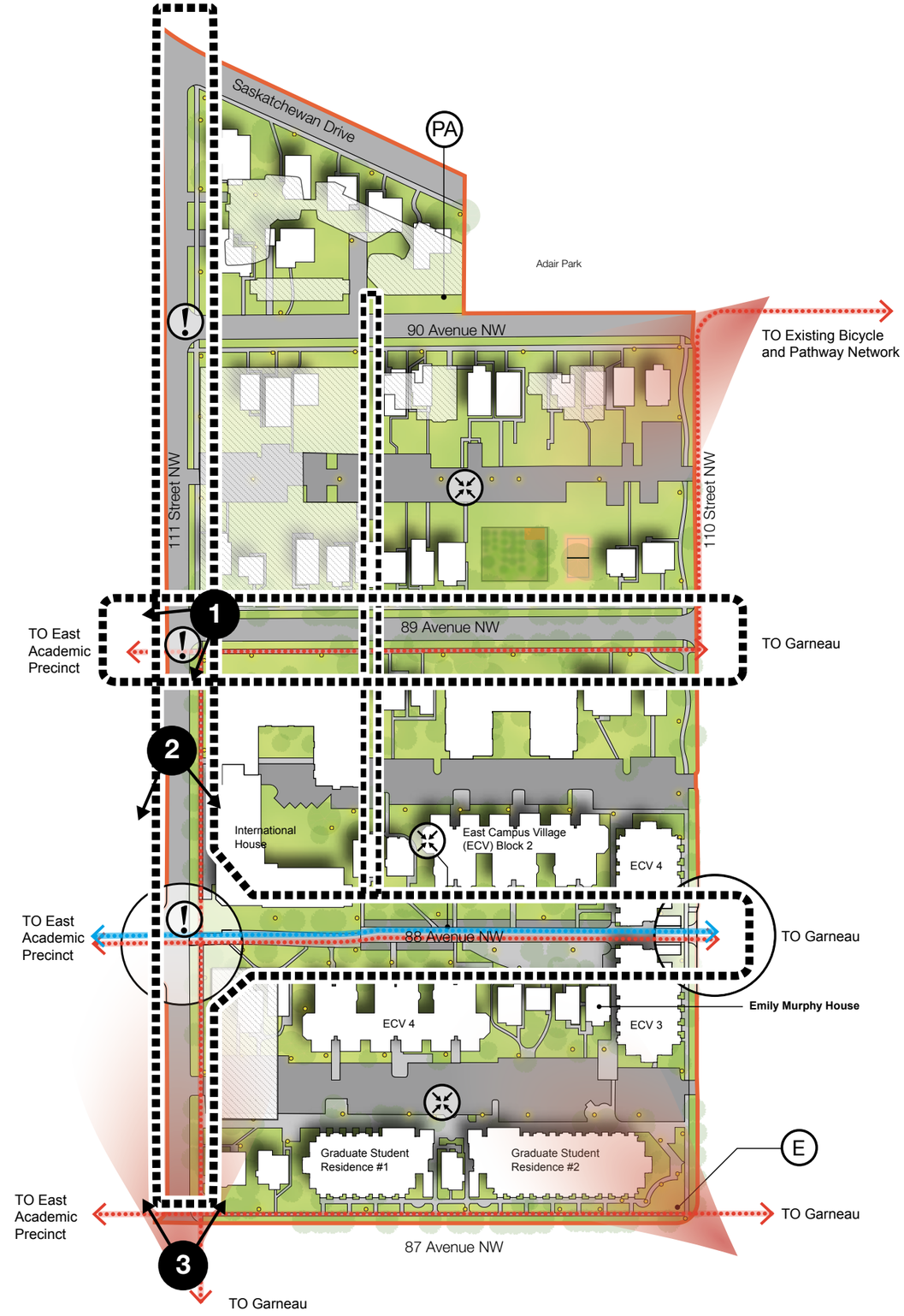
- Building
- Future development
- New development
- Roadway
- Pathway
- Surface parking
- Green space
- Precinct boundary
- Community garden
- Major pedestrian circulation route
- Major service circulation route
- (PA) Existing public art
- Muster point
- (E) Entrance sign

Opportunities

- Key opportunity
- Photo view angle
- Gateway condition

Issues

- Pedestrian/service vehicle conflict node
- Pedestrian safety concern



3.5.7 Lister + Central Services Precinct

The Lister + Central Services Precinct is located on the south side of 87 Avenue, and east of 117 Street. The Lister Centre complex is a central feature of the area, which accommodates the Schaffer, Kelsey, Mackenzie, and Henday residence halls, as well as the Lister Conference Centre. The residence halls are connected by an outdoor pedestrian linkage which is somewhat dated, and in need of enhancements. Open space assets are provided to the south of the Lister complex, with an outdoor rink and the Lister Field (or South Field) sportsfield. The significant student population in this area crosses the busy 87 Avenue roadway on a daily basis, creating a need for improvements to the intersection at 116 Street to facilitate these movements. The balance of the Precinct accommodates the Central Services area, which houses Materials Management, the Heating and Cooling Plants, and other service buildings. These uses generate a significant amount of vehicle and equipment traffic, presenting conflicts with pedestrians who walk through the area to access the Whyte Avenue commercial area to the east.

Core issues identified in this Precinct include:

- Co-existence and poor articulation of pedestrians/bicycles and service vehicles on west and east sides of Lister Centre complex
- High percentage of asphalt hardscape throughout area
- Significant pedestrian traffic from Lister Centre across 87 Avenue to the main part of North Campus and the interaction with the significant vehicular traffic at this intersection
- Pedestrian traffic from Whyte Avenue and Garneau community to Lister Centre cuts through parking/storage areas that are not amenable to pedestrians
- Underutilized recreation area to the south of Lister Centre
- Poorly designed parking/entrance area to Lister Centre on 87 Avenue
- Central Services area has large amount of vehicle traffic and equipment loading

Major opportunities identified in this Precinct include:

- Enhancements to service area to east of Lister Centre to create pedestrian/bicycle corridor
- Improved lighting and better delineation between pedestrian/bicycle pathway and service vehicle access
- Consideration of improvements to recreation area to the south of Lister Centre, including reuse of the surface parking area as a potential future development site
- Coordination with Alberta Infrastructure regarding potential improvements to area to the north of the Jubilee Auditorium to create an integrated pedestrian plaza
- Improved pedestrian/bicycle linkage across 87 Avenue to accommodate pedestrian flows from Lister Centre to campus and address vehicular traffic
- Reconfiguration of parking/entrance area to Lister Centre to create more welcoming environment for pedestrians
- More prominent gateway feature at 116 Street and 87 Avenue to reflect arrival to the main part of the North Campus

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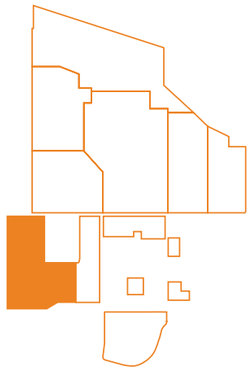
Issues and Opportunities plan for Lister + Central Services Precinct

Figure 13



Legend

- Building
- Structured parking
- Underground parking
- Roadway
- Pathway
- Surface parking
- Green space
- Precinct boundary
- Service vehicle parking
- Service bay
- Sub-area Boundary
- Major pedestrian circulation route
- Major service circulation route
- (PA) Existing public art
- Muster point
- (E) Entrance sign
- (P) Underground parking entrance

Opportunities

- Key opportunity
- Photo view angle
- Gateway condition

Issues

- Pedestrian/service vehicle conflict corridor
- Pedestrian/service vehicle conflict node

3.5.8 Health Sciences Precinct

The Health Sciences Precinct is a large area located south of 87 Avenue, and extending generally between 112 Street and 114 Street. University buildings in the area include the Edmonton Clinic Health Academy, the Katz Group Centre for Pharmacy and Health Research, the Heritage Medical Research Centre, the Li Ka Shing Centre, the Research Transition Facility, and Corbett Hall (which currently houses the Faculty of Rehabilitation Medicine). Many of the buildings in the immediate area provide related health care services to the Edmonton region through Alberta Health Services, including the Cross Cancer Institute, the Kaye Edmonton Clinic, University Hospital, and the Mazankowski Alberta Heart Institute. The density of development in the area offers little in the way of open space assets, apart from a space at the southwest corner of 87 Avenue and 114 Street, a new site at the south end of the Research Transition Facility, and the historic quad area at Corbett Hall. Both 112 Street and 114 Street are busy arterial roadways, providing a poor pedestrian environment. The Health Sciences/Jubilee LRT station on the west side of 114 Street has been a recent major addition that allows people to access the campus via public transit. The sportsfield areas to the south of Corbett Hall have been identified as a potential future development area.

Core issues identified in this Precinct include:

- 114 Street corridor accommodates high volume traffic and transit, resulting in a poor pedestrian and bicycle environment
- Sidewalks on the west side of 112 Street are adjacent to high volume traffic and result in poor pedestrian environment
- Pedestrian and service vehicle conflicts on the south side of 87 Avenue between the Katz Group Centre and the Heritage Medical Research Centre
- Major gateways at 112 Street and 114 Street and University Avenue lack visual impact
- Existing hardsurface pathways do not reflect desire lines of pedestrians moving through Corbett Quad
- Pedestrian connections tend to terminate in surface parking areas in many locations
- Preservation or articulation of view corridors to Corbett Hall will be important when area undergoes redevelopment

Major opportunities identified in this Precinct include:

- Consideration of additional boulevard tree planting, sidewalk relocations, or other measures to the enhance pedestrian experience along 112 Street and 114 Street
- Enhanced treatment of pedestrian crossing of service vehicle entrance on the south side of 87 Avenue to reduce conflicts
- Ongoing development of new park space to the immediate south of Research Transition Facility
- Partnership with Alberta Infrastructure and Alberta Health Services to explore enhancements to open space north of Edmonton Clinic Health Academy
- Partnership with Alberta Infrastructure and Alberta Health Services to explore enhancements to cloistered plaza space north of the Walter C. MacKenzie Health Sciences Centre
- Corbett Field east and west presents redevelopment and/or enhancement opportunities
- Design, architecture and history of Corbett Hall should be highlighted with enhanced landscape design of the Corbett Quad
- Additional seating facilities to foster gathering spaces in Corbett Quad, including closer to Whyte Avenue
- Consider expanded/integrated childcare facility with open space redevelopment
- Relocation of surface parking west of Corbett Hall to underground locations when redevelopment occurs
- Enhanced pedestrian linkage across University Avenue to Braithwaite Park to encourage community connection

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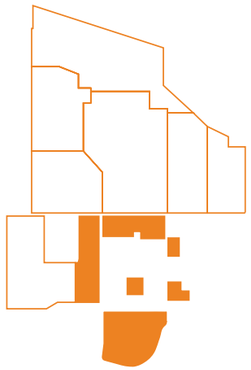
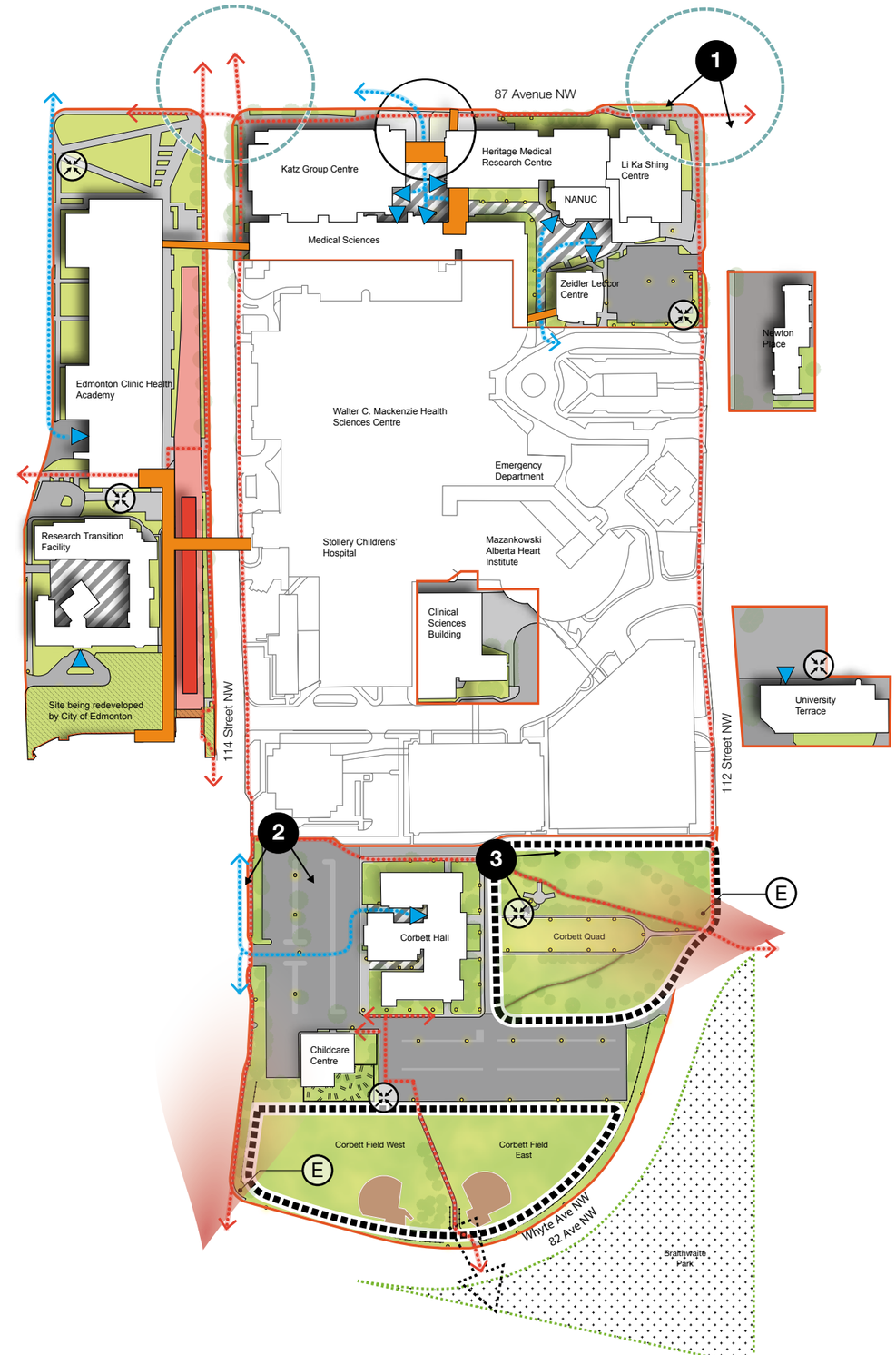
Issues and Opportunities plan for Health Sciences Precinct

Figure 14





Legend

- Building
- Elevated walkway
- Structured parking
- Health Sciences / Jubilee LRT station
- LRT R.O.W.
- Roadway
- Pathway
- Surface parking
- Green space
- Outdoor daycare play area
- Future development
- Community Park
- Precinct boundary
- Service vehicle parking
- Service bay
- Major pedestrian circulation route
- Major service circulation route
- PA Public art
- Muster point
- E Entrance sign

Opportunities

- Key opportunity
- Photo view angle
- Gateway condition
- Potential pedestrian linkage
- Major node

Issues

- Pedestrian/service vehicle conflict node
- Desire Line

The Future Campus Landscape

Section
Four

92 4.1. Overall Concept and Strategic Interventions
94 4.1.1. Landmarks, Gateways and Edges
96 4.1.1.1. Gateway Plaza
98 4.1.1.2. River Valley Promenade
100 4.1.1.3 West Campus Promenade
102 4.1.1.4 87 Avenue Corridor
104 4.1.2. Major Districts, Open Spaces and Nodes
108 4.1.2.1. Transit Hub / Prairie Parkland Plaza
110 4.1.2.2. Outdoor Amphitheatre
112 4.1.2.3. Main Quad
114 4.1.2.4. Celebration Plaza
116 4.1.2.5. Open-Air Market
118 4.1.3. Connections and Pathways
122 4.1.3.1. 114 Street
124 4.1.3.2. 112 Street
126 4.1.3.3. Fine Arts / Law Plaza
128 4.1.3.4. 89 Avenue Promenade
130 4.1.3.5. Cafe Promenade
132 4.1.3.6. Main Quad Linkage
134 4.1.4. Seasonality and Around-the-Clock Use of the Landscape

4.0 The Future Campus Landscape

The North Campus Open Space Plan develops a long-term vision of how the campus can continue to evolve over the next 20 years, supporting the University's broader goals and objectives.

Open space has been a defining component of the North Campus since its establishment. Over the past century, the open spaces and linkages on the campus have retained their importance and prominence; however, with continued growth expected within a confined area, the retention of that open space network becomes critical to maintaining a high-quality landscape.

Based on the assessment of the current conditions on the North Campus, an understanding of the University's vision and policy framework, and input from the engagement activities undertaken, the Plan reinforces the historical character of the campus, while accommodating growth and ongoing innovation. The concepts presented in the Plan offer ideas and opportunities of how the North Campus landscape can be enhanced, while respecting that there may be alternatives to achieving the overarching goals of the open space network.

The conceptual framework addresses the key guiding principles of the Plan:

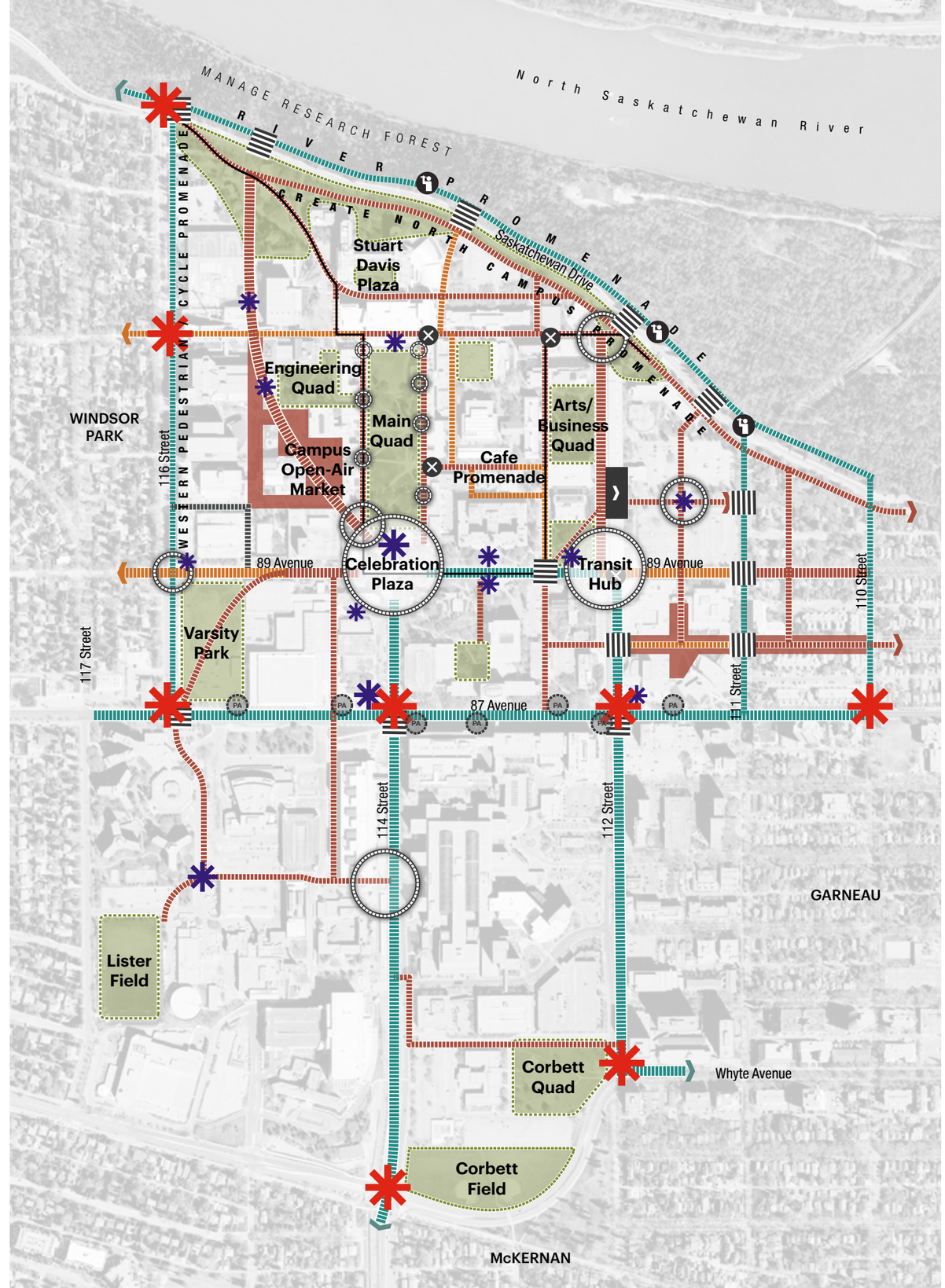
- Open spaces and pedestrian linkages will be safe, inclusive and accessible to all
- Enhancements to open spaces and corridors will respect the North Campus' sense of place and history
- The open space network will contribute to the academic program as a learning landscape
- The campus landscape will play a role in the broader development of Edmonton
- Neighbouring communities will be better integrated with the open space network
- Improvements to the campus landscape will be undertaken with a sustainable approach in mind

Naturalized planting area near Biological Sciences building.

North Campus Strategic Concept

Figure 15

The Open Space Plan takes a strategic approach to evaluating the existing open space network on the North Campus, and how these assets are interconnected. While proposing new open space and connection opportunities, the Plan also identifies essential enhancements to existing spaces to make them more relevant to the present, with an eye to the future. As illustrated on Figure 15 – North Campus Strategic Concept, a key component is to identify critical connections between open space areas throughout the campus, ensuring that these spaces are truly part of an overall network, while retaining individual character and relevance.



Legend

- Major Green Space
- Primary Pedestrian Corridor
- Shared Use Corridor (Service and Pedestrian)
- Pedestrian + Vehicular Corridor
- Service Vehicle Corridor
- Heritage Walk
- Major Node
- Building Barrier
- Lookout
- Campus Gateway
- Plaza
- Major Crosswalk

4.1 Overall Concept and Strategic Interventions

The Open Space Plan for the North Campus combines an approach of retaining and enhancing existing open space assets and linkages with the provision of new features that results in an overall high-quality, sustainable landscape.

The Main Quad will continue to retain its profile as the central open space feature on the campus, with a number of other main open space areas such as the Arts/Business Quad, the Engineering Quad, the Corbett Hall Quad, and the redesigned Varsity Field providing additional opportunities. Gateways such as 87 Avenue and 114 Street will provide a sense of arrival to the campus, and enhanced edge conditions such as 116 Street will improve the integration of the campus into its surrounding communities. Areas such as the Open Air Market north of the Students' Union Building and the Prairie Parkland Plaza to the south of Rutherford Library will create new gathering nodes. A more urbanized corridor between Triffo Hall and the North Power Plant and an enhanced connection from this area to the Main Quad will create safer pedestrian/bicycle linkages and facilitate movements from the various open space nodes on the campus.

In all aspects of the open space network, the sense of place and history of the campus will be respected, drawing on the character of the University, and setting the stage for future development. The improvements to the open space assets and campus connections will be complemented by a continued commitment to sustainable practices, both from a design and an operational perspective. New designs will be made to accommodate four-season enjoyment by those on campus, recognizing the majority of students experience the North Campus in the fall and winter months. Safety, security and accessibility of the campus grounds will be foremost, with improved lighting, signage and gathering spaces to encourage more activity, both in day and night. An emphasis on pedestrian activity will be applied to the design of corridors and pathways on campus, with service vehicle traffic being accommodated, but not as the predominant use. The campus will serve as an important physical component of the academic curriculum, functioning as a learning landscape.

Alumni Walk on the Main Quad.

Overall Open Space Concept for North Campus

Figure 16

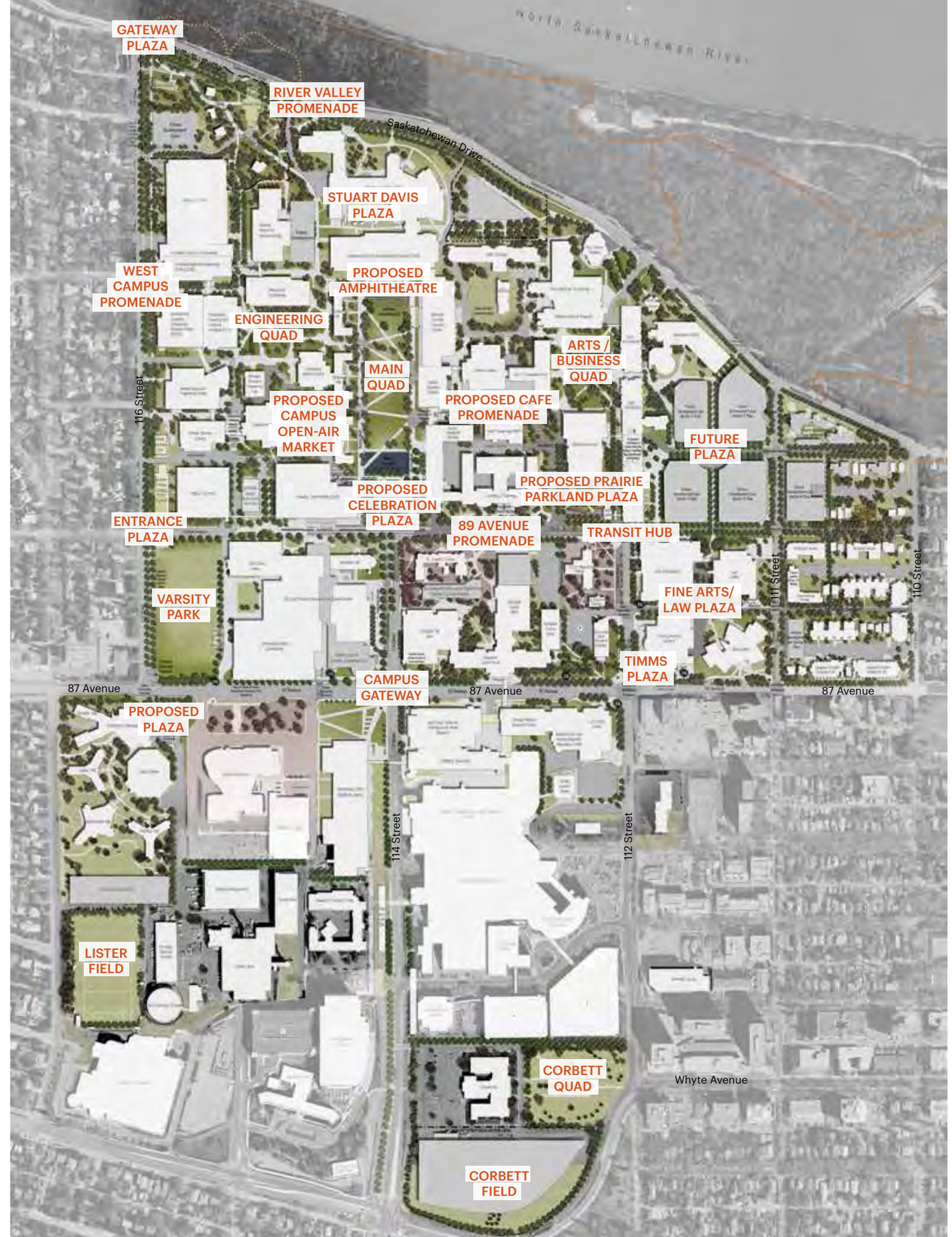
Legend

Building Structures

- Existing Building
- Building to be Removed
- Future Development
- Future Study Area

Hard and Soft Surfaces

- Pedestrian Surface
- Vehicular Surface
- Shared Surface
- Pedestrian Woonerf
- Decking
- Water Feature
- Softscaping
- Wildflower Prairie Planting
- Proposed Deciduous Tree
- Existing Deciduous Tree
- Existing Coniferous Tree
- (P) Public Parking
- (PA) Public Art
- Campus Gateway Feature



4.1.1 Landmarks, Gateways and Edges

The North Campus landscape is comprised of a variety of elements that are prominent features that act as wayfinding cues, act as introduction points to the grounds, and serve as interfaces with surrounding areas.

Landmarks exist on the campus in the form of natural features (e.g. the North Saskatchewan River Valley), built form (e.g. the Arts Building), and other significant urban features (e.g. the Norman Yates mural on the north elevation of Education North).

Gateways serve as major entry points into the North Campus, and can be vehicle-oriented (e.g. Saskatchewan Drive and 116 Street) or oriented towards pedestrians and bicycles (e.g. 88 Avenue Commons).

Edges can be found on the campus where the grounds interface with natural boundaries (e.g. the North Saskatchewan River Valley), or where more structured edges are created by built form (e.g. 116 Street between 87 Avenue and Saskatchewan Drive).

The Open Space Plan builds upon existing landmarks, gateways and edges on the campus, and proposes enhancements to further strengthen these key elements. Two significant edge areas (the River Valley and West Campus Promenades) are identified for improvements to maintain the presence of the North Campus, while offering a welcoming context to surrounding communities. Significant gateway areas (Gateway Plaza and major nodes on 87 Avenue) are proposed for additional landscaping treatments to strengthen the sense of arrival to the North Campus, and help serve as gathering spaces. Within these areas, landscape features and elements such as public art installations will create new landmarks to assist in campus wayfinding and developing a sense of place.

Key Opportunities:

- Gateway Plaza
- River Valley Promenade
- West Campus Promenade
- 87 Avenue Corridor

Landmark: Norman Yates mural on Education North.

Gateway: 88 Avenue Commons in East Campus Village.

Edge: The North Saskatchewan River valley on the north side of campus.

Landmarks, Gateways and Edges – Key Opportunities

Figure 17

Legend

Building Structures

- Existing Building
- Building to be Removed
- Future Development
- Future Study Area

Hard and Soft Surfaces

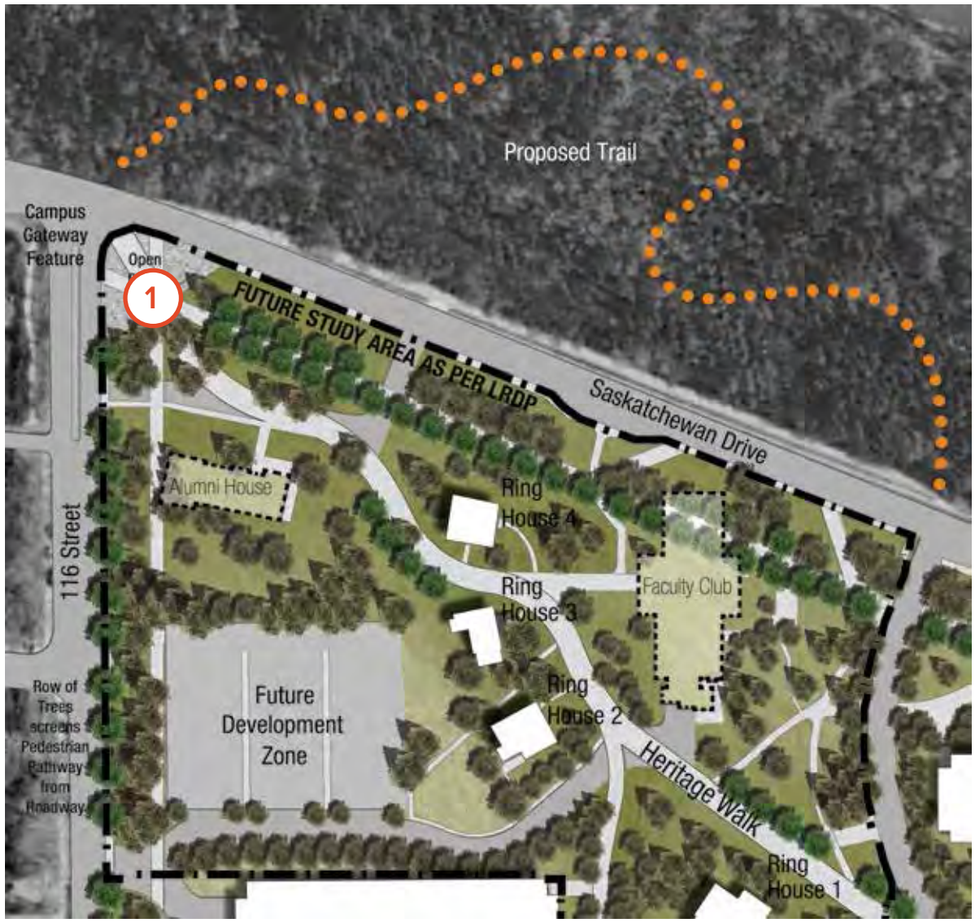
- Pedestrian Surface
- Vehicular Surface
- Shared Surface
- Pedestrian Woonerf
- Decking
- Water Feature
- Softscaping
- Wildflower Prairie Planting
- Proposed Deciduous Tree
- Existing Deciduous Tree
- Existing Coniferous Tree
- Public Parking
- Public Art
- Campus Gateway Feature

Key Opportunities:

1. Gateway Plaza
2. River Valley Promenade
3. West Campus Promenade
4. 87 Avenue Corridor

4.1.1.1 Gateway Plaza

The proposed Gateway Plaza area will create a gathering node at 116 Street and Saskatchewan Drive, and a more prominent sense of arrival to the northwestern corner of the North Campus. A major pedestrian walk will lead from the plaza, through the grounds of the historic Ring Houses, and southeast towards the Main Quad and the heart of the campus.



BAILEY PLAZA, CORNELL UNIVERSITY, NY

The Gateway Plaza area will create a destination node for the campus, surrounding community, river valley users, and establish a distinctive sense of arrival to the North Campus.

Figure 18: Proposed Gateway Plaza – Plan View

Figure 19: Proposed Gateway Plaza – Rendered View 1

4.1.1.2 River Valley Promenade

The proposed River Valley Promenade along Saskatchewan Drive will create an enhanced and consistent pedestrian/bicycle experience along this major edge of the campus. The existing sidewalk would be replaced with a new, wider sidewalk set back from the street, creating an improved environment for all users, regardless of mobility. A double allee of trees will be created, blending between existing mature trees in the area and new plantings. New and enhanced pedestrian crossings over Saskatchewan Drive will also provide better access to the river valley trails.

Figure 21: Proposed River Valley Promenade Section (looking east)

Figure 20: Proposed River Valley Promenade – Plan View

POET'S WALK, CENTRAL PARK, NY

Broad pedestrian promenades with double tree allees will link the northwest gateway area to the rest of the campus along 116 Street, Saskatchewan Drive, and internal linkages.

HERITAGE WALK 1928, UNIVERSITY OF ALBERTA

Heritage Walk, an enhanced promenade, harkens back to the original staff residential area on campus, allowing pedestrians and cyclists to better experience the historic Ring Houses and access the central part of the campus.

Source: University of Alberta Archives, UAA 69-18-39.

POTTERY ROAD BICYCLE AND PEDESTRIAN CROSSING, TORONTO, ON

Enhanced and formalized pedestrian/cyclist crossings on Saskatchewan Drive will provide improved linkages between the campus and the river valley and its associated trail network.

4.1.1.3 West Campus Promenade

The West Campus Promenade proposes to create an enhanced pedestrian/bicycle linkage along the east side of 116 Street, from 87 Avenue north to Saskatchewan Drive. At the same time, the enhancements will serve to improve the edge condition and connections between between the North Campus and the Windsor Park community to the west. The existing sidewalk would be replaced with a new, wider sidewalk set back from the street, creating an improved environment for all users, regardless of mobility. A double allee of trees will be created, blending between existing mature trees in the area and new plantings. These improvements will build on portions of the corridor where similar work has already been undertaken, creating a consistent look and feel. Locations for public art or other installations to serve as landmarks for the east-west avenues that intersect with 116 Street will be explored.

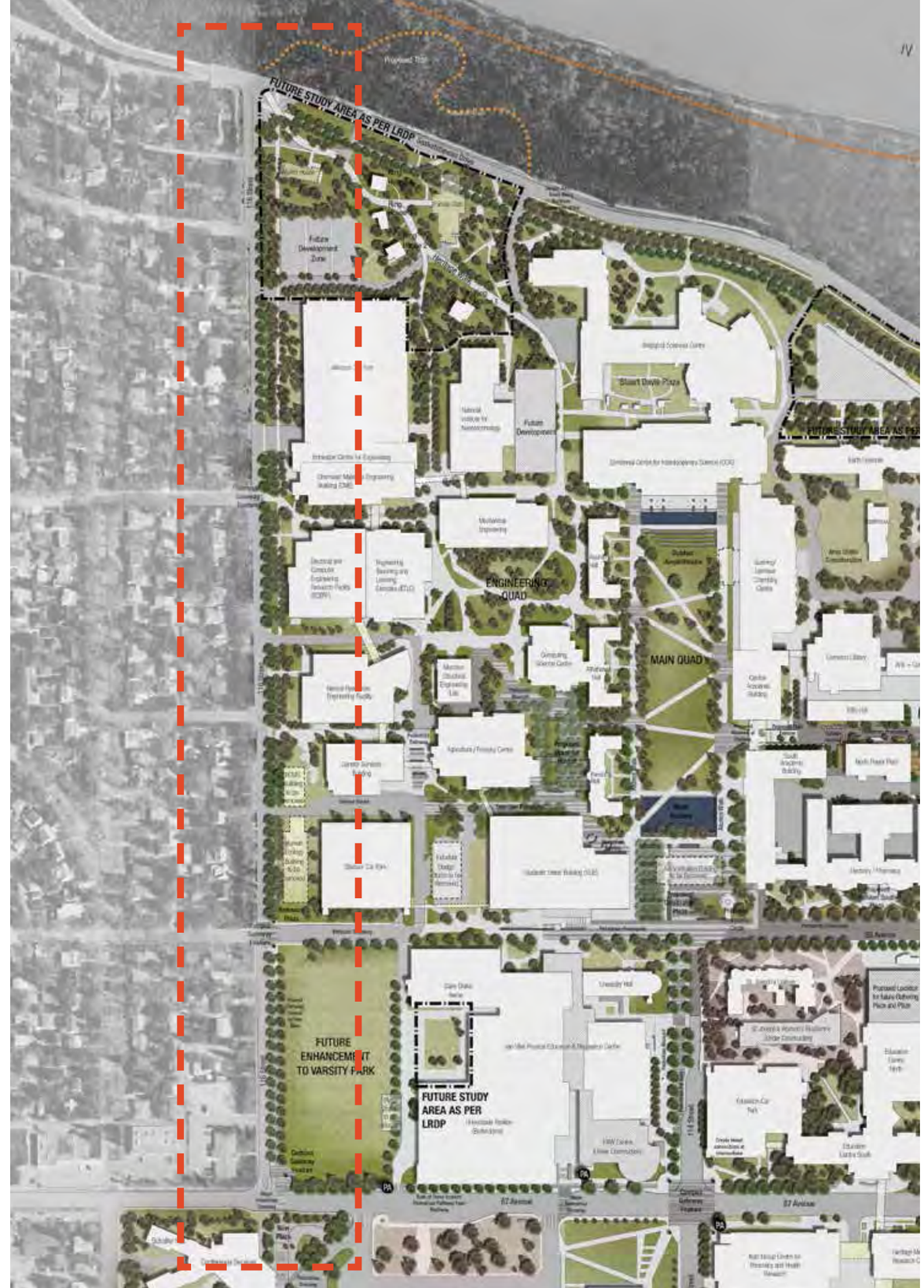
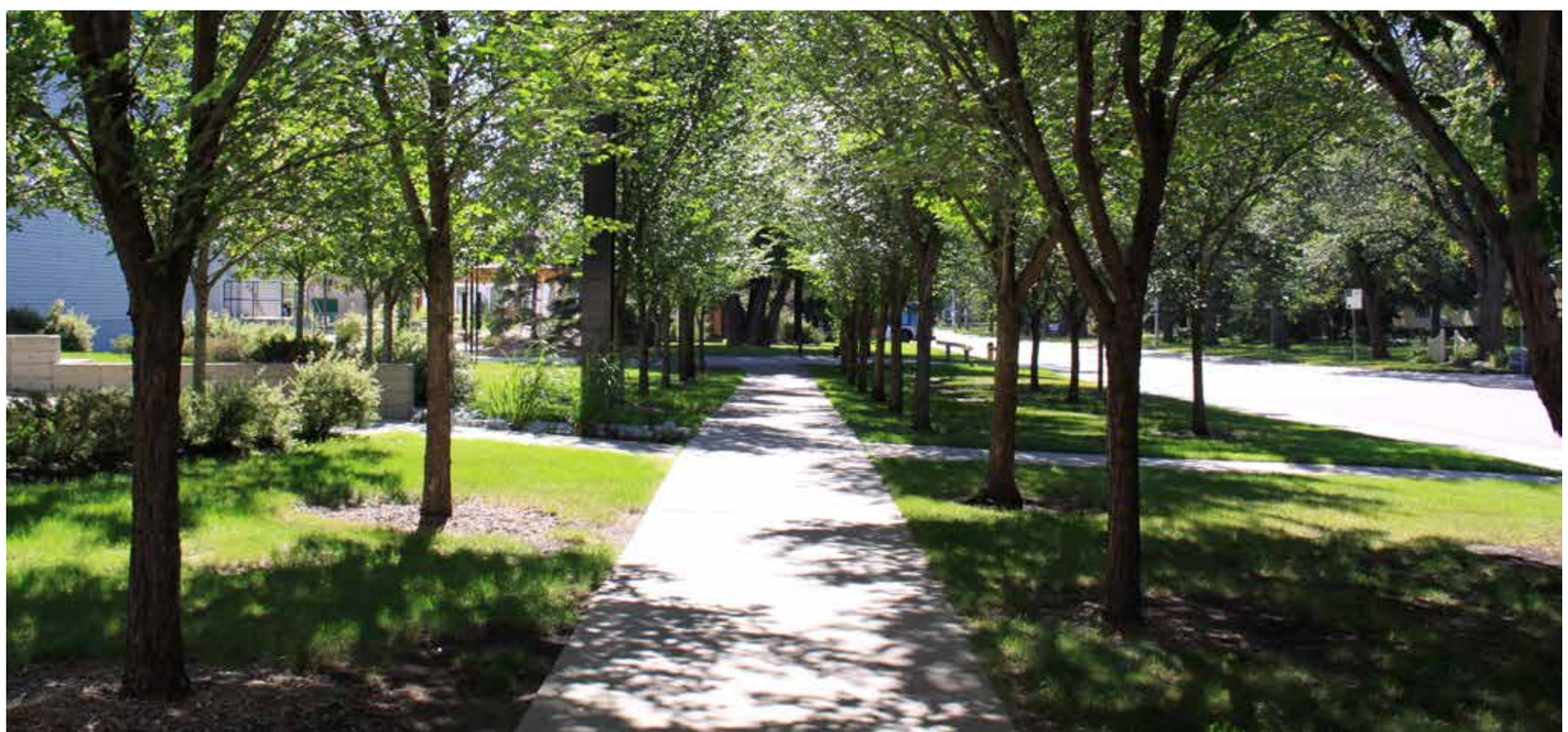


Figure 22: Proposed West Campus Promenade Plan View

▲ Figure 23: Proposed West Campus Promenade Section (looking north)

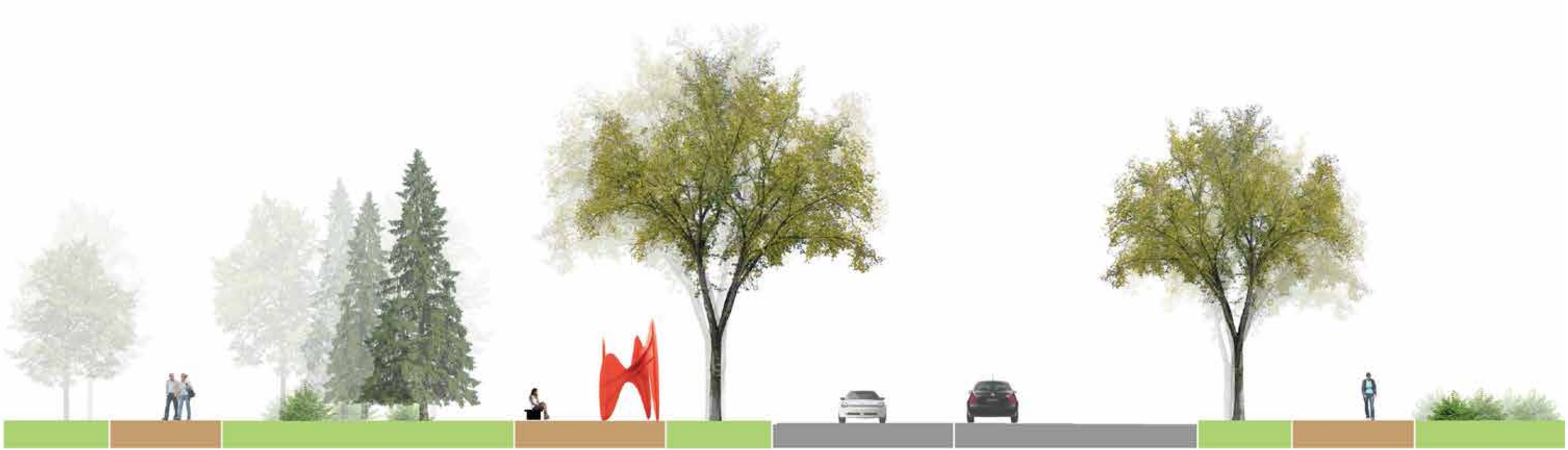
▼ Portions of 116 Street have already seen an improved sidewalk/boulevard treatment.



4.1.1.4 87 Avenue Corridor

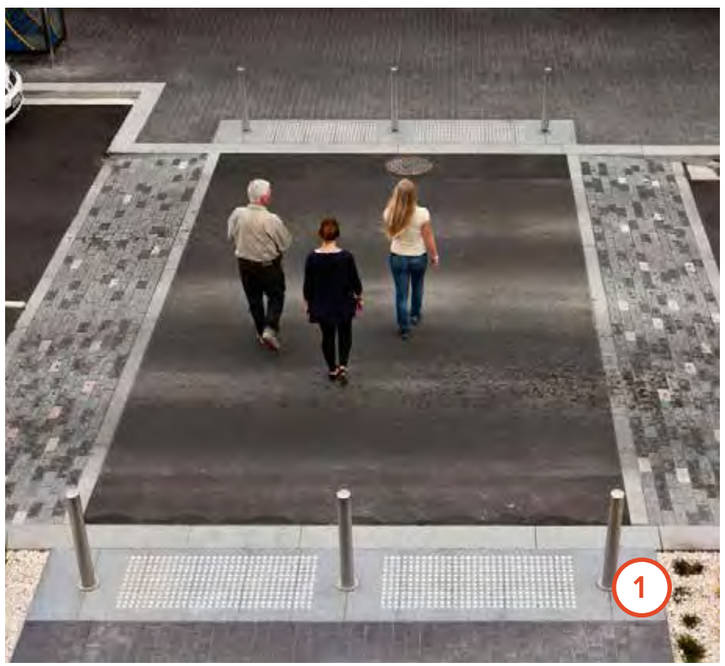
The 87 Avenue corridor serves as a major edge to the central portion of the North Campus, and creates gateways at various locations, including 112 Street, 114 Street and 116 Street. Proposed improvements include the creation of a boulevard sidewalk treatment to shift pedestrians away from the roadway, separated by a vegetated buffer. Enhanced surface treatments at the major intersections will help identify major entry points into the campus, and highlight pedestrian and bicycle accesses. Public art installation locations along the corridor will help to create local landmarks, and opportunities for showcasing student artistic projects. Improvements to the plaza area at the Timms Centre for the Arts will create a better gathering space and entry point to the campus.

Figure 24: Proposed 87 Avenue Corridor – Plan View



▲ Figure 25: Proposed 87 Avenue Corridor Section (west of 112 Street, looking east)

Green Space | Vehicular Circulation | Pedestrian Circulation | Shared Surface | Bicycle Circulation



SODA LANE, TARADALE, NZ ▲

HIRSHHORN MUSEUM SCULPTURE GARDEN, WASHINGTON, D.C. ▲

4.1.2 Major Districts, Open Spaces and Nodes

The landscape of the North Campus has a well-developed network of character areas, open space features, and locations for gathering that together create a variety of experiences for those that use the grounds.

Districts are areas of built form that can integrate with natural features (e.g. the North Saskatchewan River Valley) or social patterns of life (e.g. concentrations of activity) to create areas of geographic and visual reference. The Open Space Plan has identified a number of character Precincts that serve as districts on the campus (see Figure 6).

Open spaces serve a range of functions for campus users – areas to gather, recreate, rest, converse, or for quiet contemplation. They can be largely areas of turf, allowing freer movement and a sense of openness with views; conversely, they can be areas with more vegetation with seating in a more ornamental setting. Linkages between spaces and proper integration with surrounding buildings are critical to their success.

Nodes are identified as areas with a high concentration of activity, such as key intersections for pedestrians and/or vehicles, public transit links/stations, or actively-used open spaces (e.g. plazas). They are commonly used as gathering places and often serve as local landmarks.

Open space is a key part of the character of the North Campus.
Source: Peak Experience Imagery.

Main Quad is the central open space on campus.

The International House plaza is an active node in East Campus Village.

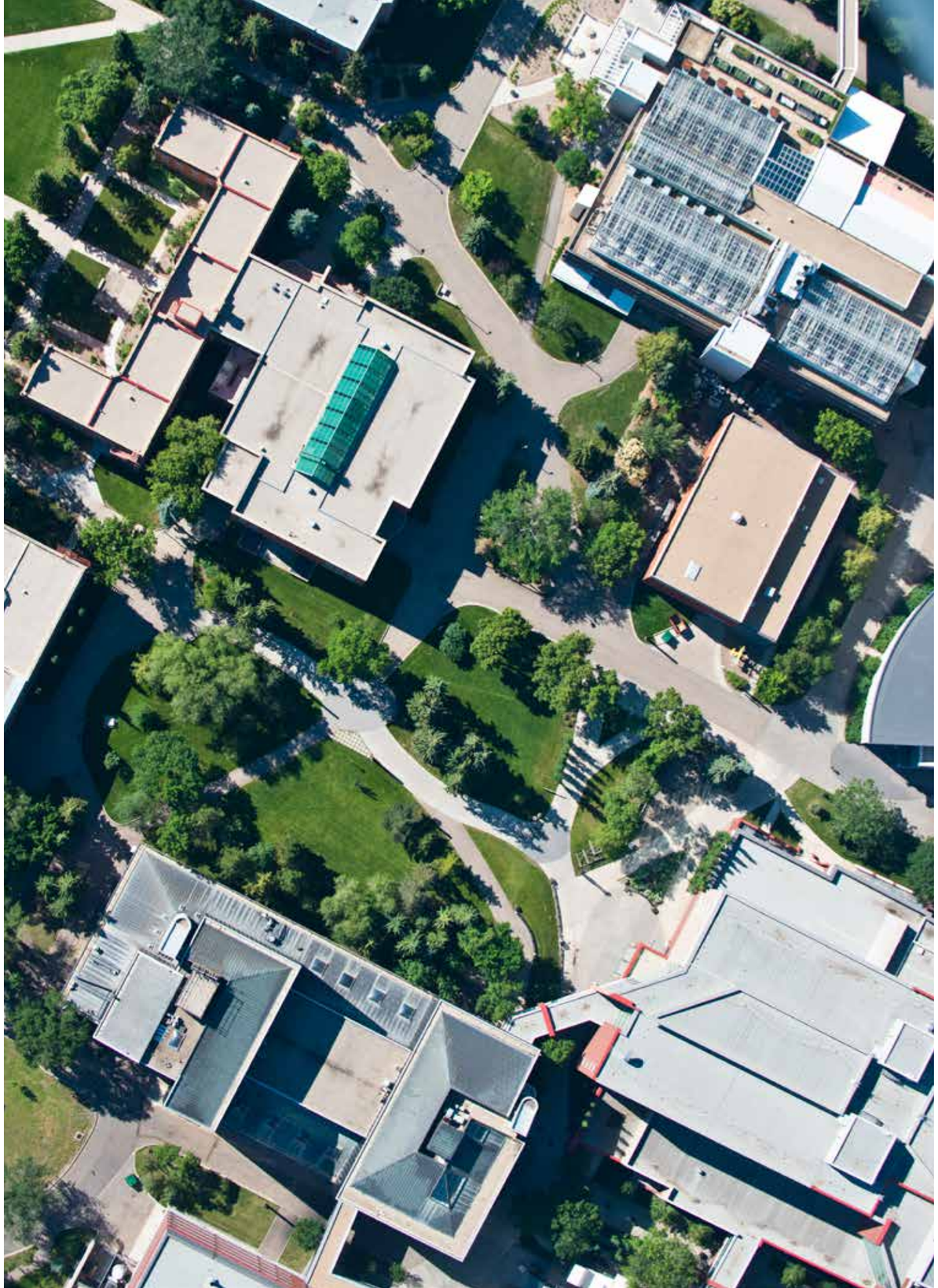
Two campus districts – the East Academic Precinct (left) and East Campus Village (right).

The Open Space Plan proposes a number of enhancements to existing open spaces and nodes, in addition to new amenities, throughout the campus. The proposed elements are intended to improve the overall landscape of the North Campus, but will also contribute to an enhanced experience at the Precinct level. Minor enhancements to significant open space areas such as the Arts/ Business Quad and the Engineering Quad will ensure these areas continue to serve the campus population. The Plan proposes modest improvements to the Main Quad, to improve pedestrian linkages, support the Alumni Walk and Celebration Plaza initiatives, and introduce water features as additional draws to the space. Major improvements are proposed to key nodes to the south of Rutherford Library and to the north of the Students' Union Building to create enhanced gathering and activity areas. The proposed enhancements support the broader goals of safety and accessibility, respecting the history of the campus, supporting the learning landscape, and adhering to sustainable practices.

Figure 26 identifies the key open space opportunities on the North Campus that focus on providing additional space, improved nodes and gathering areas, and further contributions to the character of the overall campus and its various Precincts. The sections below provide a brief introduction to each of the proposed improvements and supporting visual interpretations.

Key Opportunities:

- Transit Hub / Prairie Parkland Plaza
- Outdoor Amphitheatre
- Main Quad
- Celebration Plaza
- Open-Air Market



The Engineering Quad is a key open space asset for the West Academic Precinct. Source: Peak Experience Imagery.

Districts, Open Spaces and Nodes - Key Opportunities

Figure 26

Legend

Building Structures

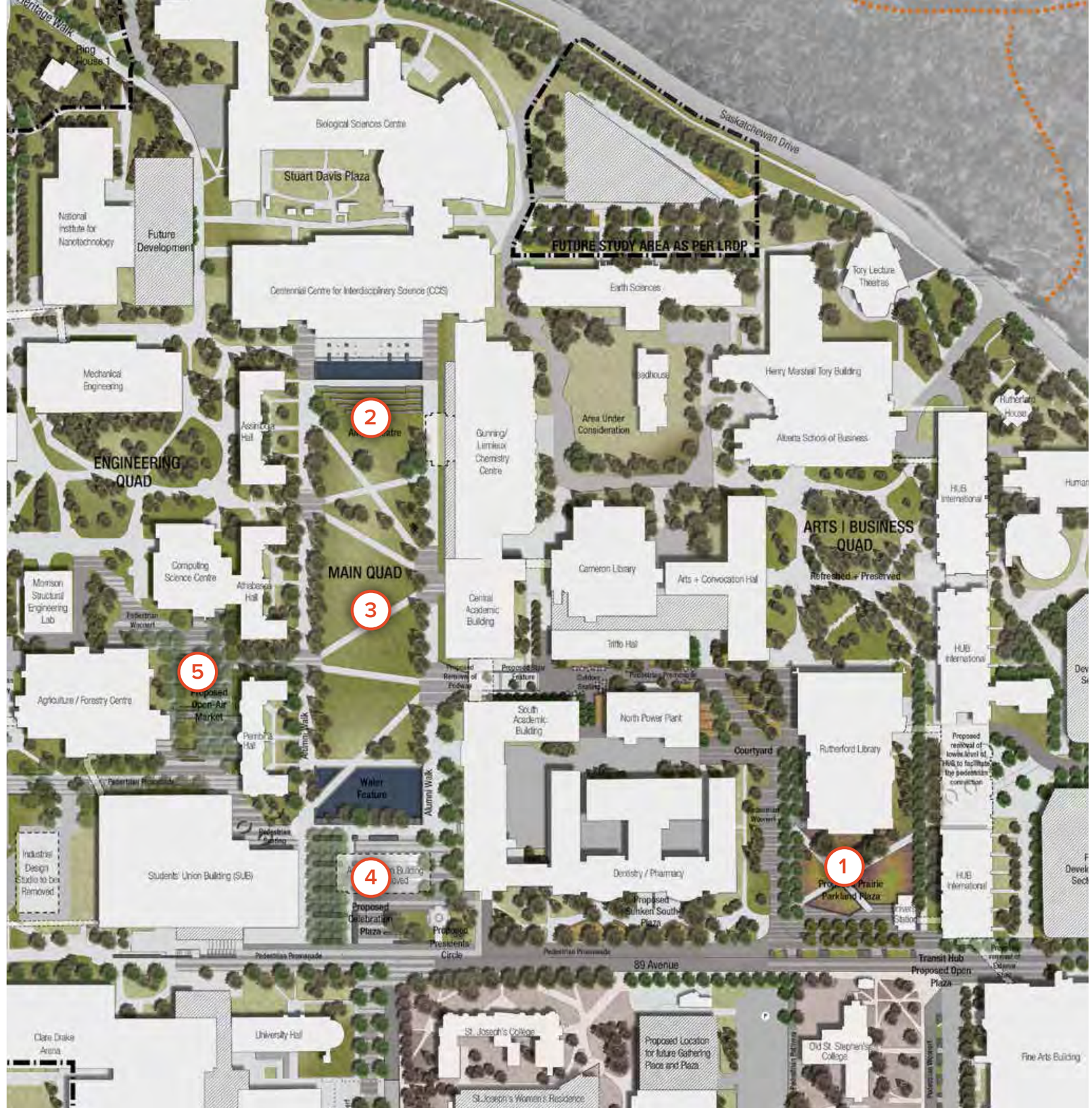
- Existing Building
- Building to be Removed
- Future Development
- Future Study Area

Hard and Soft Surfaces

- Pedestrian Surface
- Vehicular Surface
- Shared Surface
- Pedestrian Woonerf
- Decking
- Water Feature
- Softscaping
- Wildflower Prairie Planting
- Proposed Deciduous Tree
- Existing Deciduous Tree
- Existing Coniferous Tree
- Public Parking
- Public Art
- Campus Gateway Feature

Key Opportunities:

1. Transit Hub / Prairie Parkland Plaza
2. Outdoor Amphitheatre
3. Main Quad
4. Celebration Plaza
5. Open-Air Market



4.1.2.1 Transit Hub/Prairie Parkland Plaza

The proposed Transit Hub/Prairie Parkland Plaza area will provide an improved gathering and activity node outside of the busy University Station. Additional hardsurfacing areas will provide seating and meeting opportunities, complemented by additional tree planting. Enhancements will be made to the 89 Avenue transit loop in front of University Station to shift bus traffic to the south and create a larger pedestrian plaza/entry area. The open space to the south of Rutherford Library will be created as a sustainable landscape area showcasing plantings native to the central Alberta region, while supporting important pedestrian linkages. A portion of the lower level of HUB International would be removed to create an open area for seating and facilitate safer pedestrian connections from the Prairie Parkland Plaza area to the future development areas on the east side of HUB.

PLAZA DE LES CASERNES, BARCELONA, SPAIN

The transit hub integrates a naturalized prairie landscape into the lively plaza bridging multiple transportation modes.

Figure 27: Proposed Transit Hub/Prairie Parkland Plaza – Plan View

Figure 28: Proposed Transit Hub/Prairie Parkland Plaza – Rendered View 1

4.1.2.2 Outdoor Amphitheatre

Building upon the Main Quad's role as the central open and gathering space on the North Campus, the proposed outdoor amphitheatre space at the north end of the Main Quad will create a unique area for campus users to congregate. Using the natural slope of the land, more formalized terraces can be created to provide seating areas, oriented towards a proposed water feature. Turf within the terraced areas should be a hardy and low-maintenance variety to address significant foot traffic. This space fronts onto the plaza area on the south elevation of the Centennial Centre for Interdisciplinary Science, which could serve as a stage area for performances or other activities.

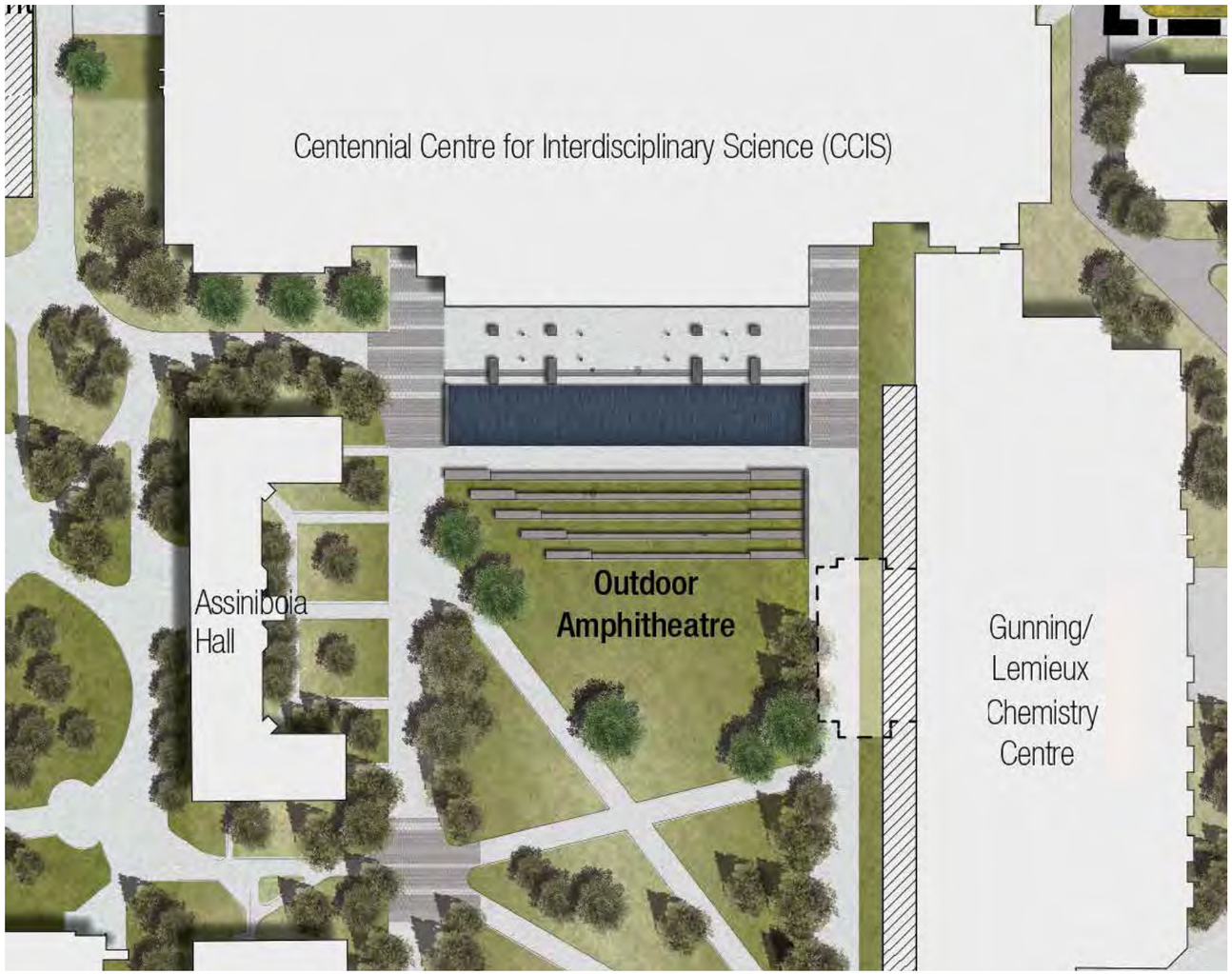
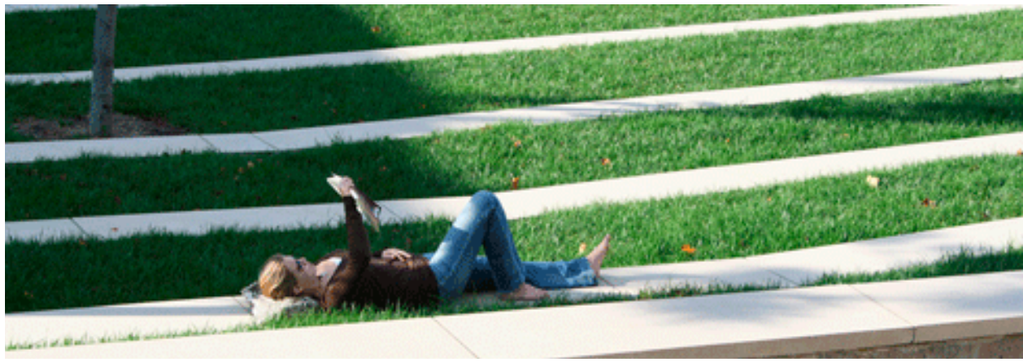


Figure 29: Proposed Outdoor Amphitheatre – Plan View

SCIENCE TERRACE, DUKE UNIVERSITY, NC



MALTESERS MOONLIGHT CINEMA, KINGS PARK AND BOTANIC GARDEN, AUSTRALIA

PLAYA VISTA CENTRAL PARK
LOS ANGELES, CA

OUTDOOR AMPHITHEATRE
GEORGIA TECH, GA

North end of the Main Quad will be enhanced by providing seating areas to create a natural outdoor amphitheatre.

4.1.2.3 Main Quad

The Main Quad has been the central open space feature on the campus since the original design for the grounds was developed in 1912. The Open Space Plan continues this focus on the Main Quad, and proposes modest improvements to the space to ensure it retains its importance and sense of place for the campus. Additional pedestrian linkages will be provided that respond to existing desire lines through the turf. The proposed Alumni Walk project is incorporated in the design, providing enhanced pedestrian linkages on the west and east sides of the space that include nodes celebrating important alumni contributions to the development of the University. A large water feature is proposed at the south end of the Main Quad, to provide an outdoor gathering space – as a visual landmark in the summer months, and an outdoor skating venue in the winter months. Improvements include a replacement of the existing stairway on the east side of the Main Quad that leads to Cameron Library, to remove the pedway linkage and create a more open, accessible and safe pedestrian environment. Also contemplated is the removal of the one-storey structure on the west side of the Gunning/Lemieux Chemistry Centre and additional building space developed on this elevation to create an arcade along the east side of Alumni Walk.

Figure 30: Proposed Improvements to Main Quad – Plan View

MAIN QUAD
UNIVERSITY OF NOTRE DAME, IN

The classic Main Quad is a key feature of the North Campus, and must be preserved. Modest enhancements will provide improved pedestrian connections and clearer views of the historic halls.

MAIN QUAD
DALHOUSIE UNIVERSITY, NS

The North Campus' Main Quad is representative of those found on many older university campuses.

4.1.2.4 Celebration Plaza

The Celebration Plaza area is proposed at the south end of the Main Quad, and contemplates the removal of the existing Administration Building. The intent of this space is to create a view corridor at the south end of the space into the Main Quad, hearkening back to the original campus design plans. The Plaza will act as a central gathering node, and will create a grand entrance into the historic heart of the North Campus from the 114 Street corridor. Complementing the space is the proposed Presidents' Circle installation, which honours the contributions of the University's founders, Rutherford and Tory. The space will feature additional tree plantings and hardsurfaced areas that will facilitate seating and gathering year-round. The proposed location of the Presidents' Circle feature on Figure 31 (and others in the Plan) is conceptual only, and may be subject to change when the detailed design process is undertaken for this installation.

NOVARTIS HEADQUARTERS

BASEL, SWITZERLAND

Celebration Plaza will feature a large open plaza space anchoring the south end of the Main Quad.

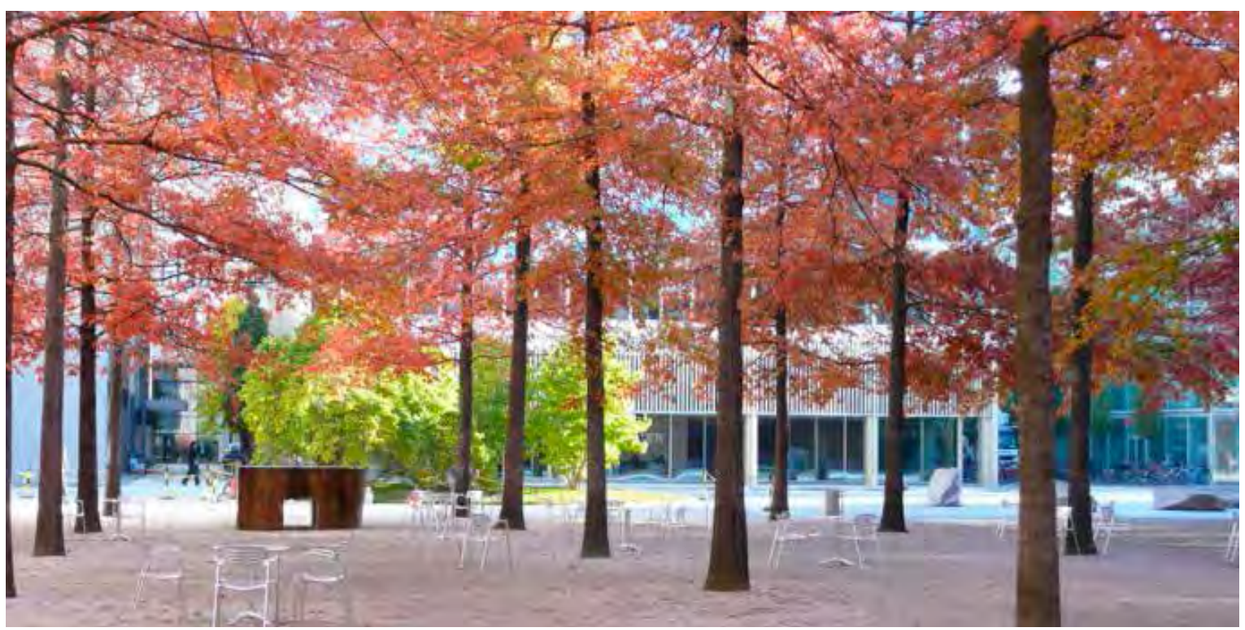


Figure 31: Proposed Celebration Plaza – Plan View

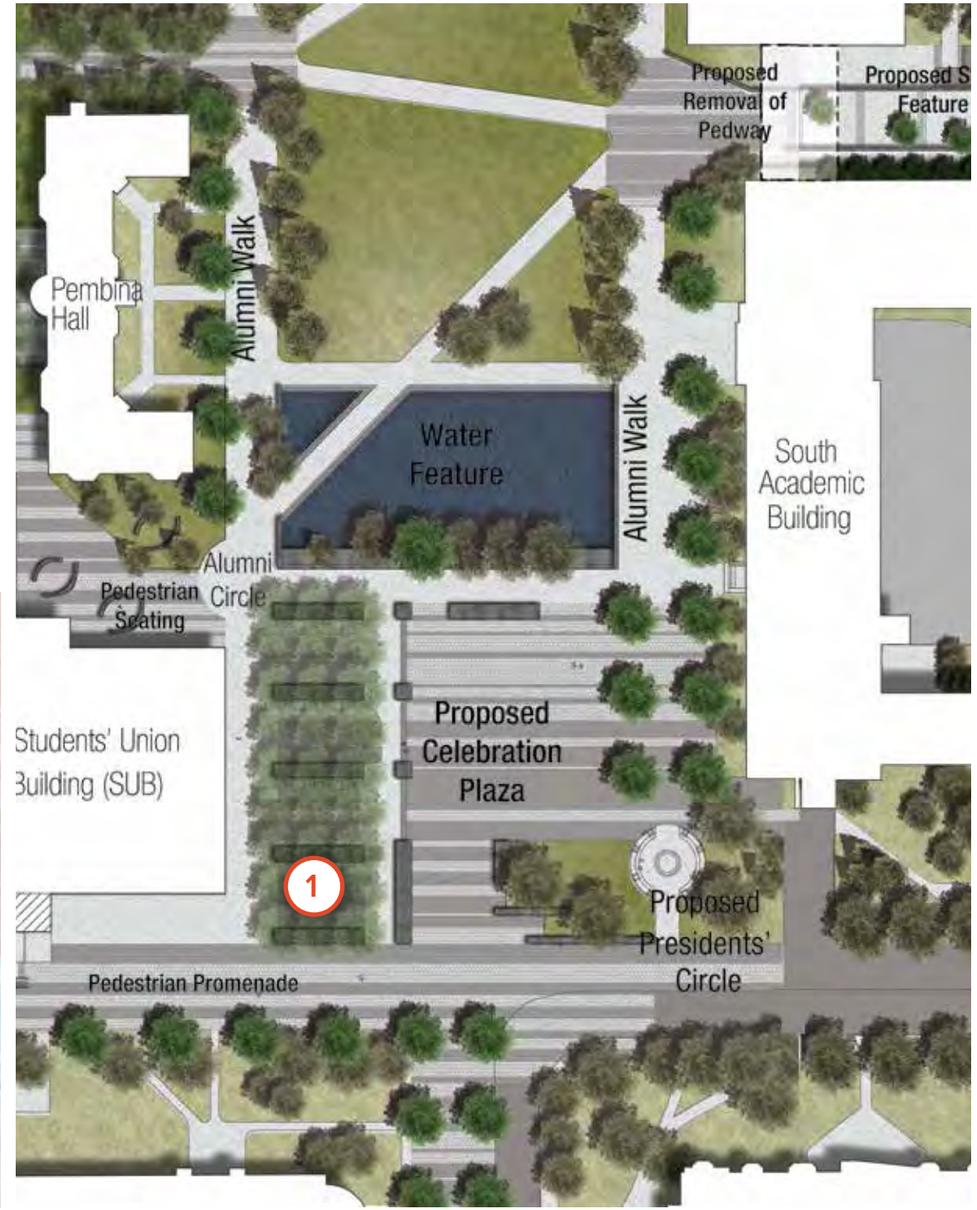


Figure 32: Proposed Celebration Plaza – Rendered View 1

BRENTON SKATING PLAZA, DES MOINES, IO

In the winter months, the water feature at the south end of the Main Quad can be converted into a skating surface, providing outdoor activity opportunities for those on campus for use during the day or evening.

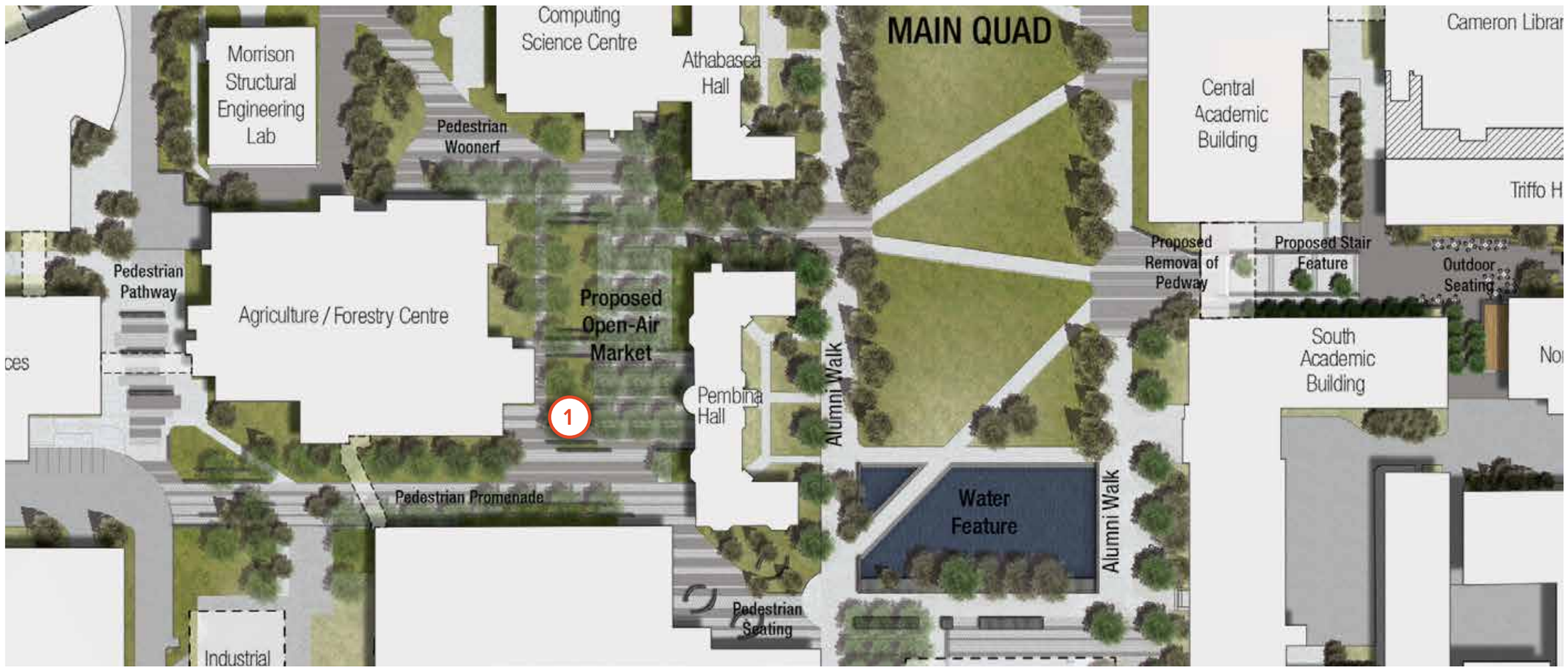
BRENTON SKATING PLAZA, DES MOINES, IO

In warmer weather, the water feature at the south end of the Main Quad will serve as an amenity area and a gathering/social node, in conjunction with Celebration Plaza and its associated activities.

4.1.2.5 Open-Air Market

The proposed Open-Air Market will create a unique gathering node on the North Campus that is intended to act as a draw for a range of activities. The existing corridor accommodates large pedestrian volumes combined with busy service vehicle traffic. Planned changes to the service access to the Students' Union Building will reduce the amount of service vehicle traffic in the area, allowing this space to become truly pedestrian-oriented.

The proposed improvements contemplate additional tree planting and the creation of a hardsurfaced space that could accommodate outdoor vendors, food trucks, student activities, or other events such as Alumni Weekend. Opportunities for how the space can be used year-round and how it can complement existing Farmers' Markets in the area will be explored.

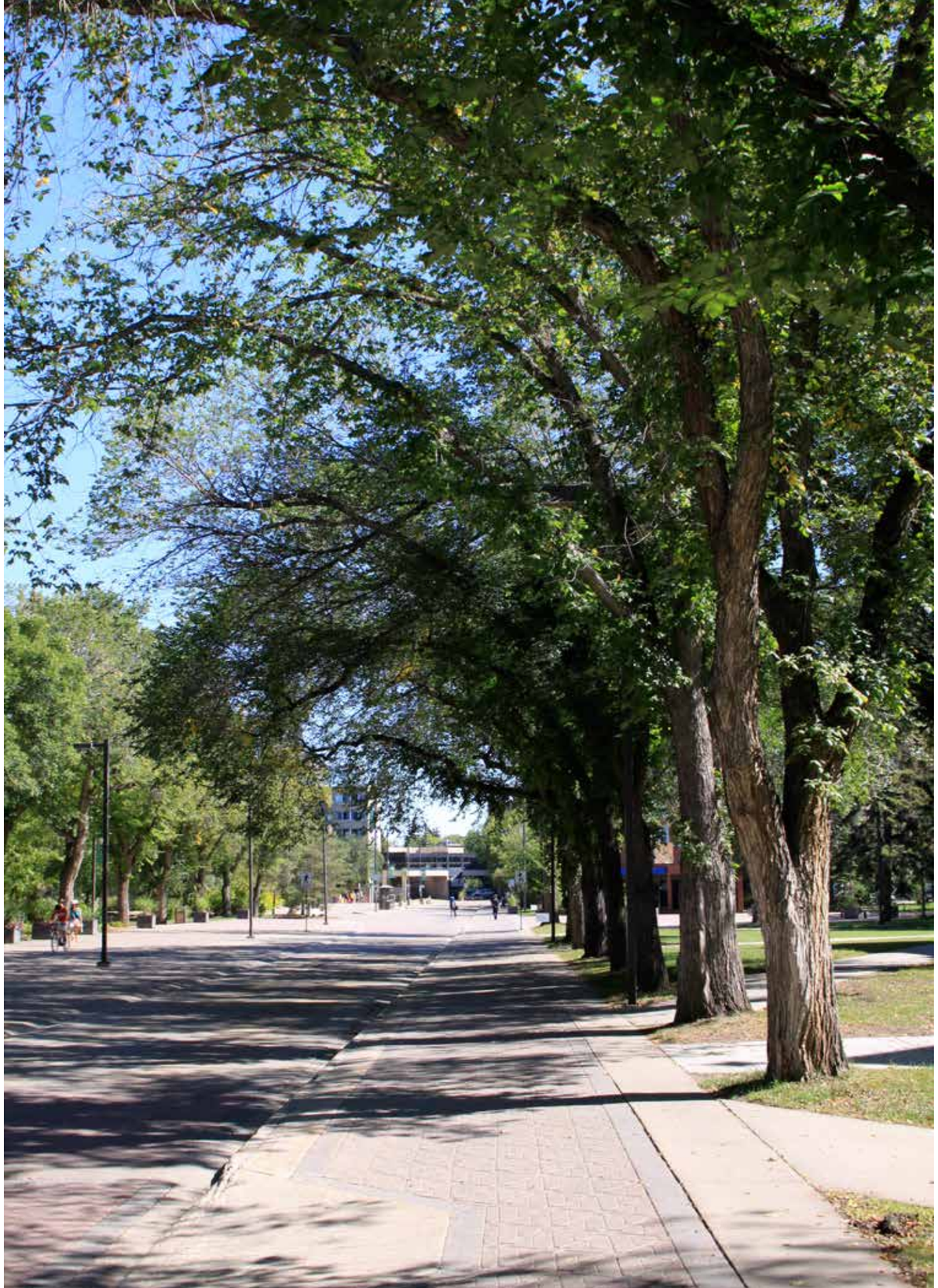


▲ Figure 33: Proposed Open-Air Market – Plan View

Figure 34: Proposed Open-Air Market – Rendered View 1

4.1.3 Connections and Pathways

The various open spaces and nodes on the North Campus would be isolated without the extensive network of connections and pathways that provide essential linkages to these spaces, and all parts of the campus. These connections have evolved over the decades into an informal hierarchy of corridors and pathways that serve a range of users and activity levels. Certain connections are oriented towards vehicles; others are oriented only to pedestrians and bicycles; others accommodate a mix of pedestrians, bicycles and vehicles in a structured way; still others are ambiguous as to what mode of traffic is being accommodated.



89 Avenue mixed-use corridor.

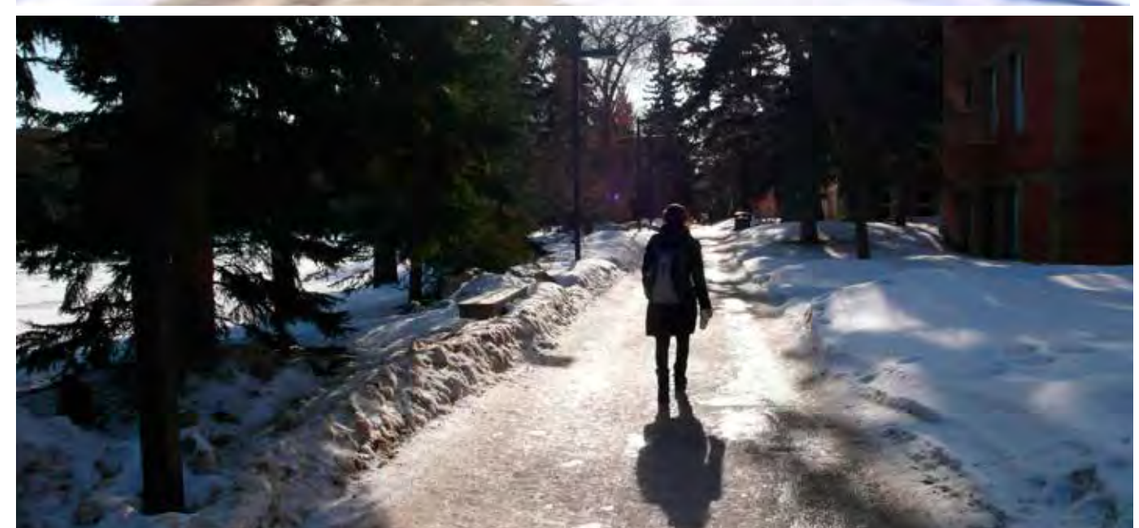
The Open Space Plan proposes a range of enhancements to existing connections and pathways throughout the North Campus to facilitate better pedestrian and bicycle safety, accessibility, and also a more rationale approach to accommodating important service vehicle traffic. The connections and pathways framework could provide a hierarchy of corridors for use in future honourific programming. The Plan focuses on major connections and pathways such as the 89 Avenue Promenade across the entire campus, the 88 Avenue Commons linkage into the campus from the Garneau community, and significant north-south alignments into the campus at 112 Street and 114 Street.

Key Opportunities:

- 114 Street
- 112 Street
- Fine Arts / Law Plaza
- 89 Avenue Promenade
- Café Promenade
- Main Quad Linkage

Service vehicle corridor north of Stadium Car Park.

Pedestrian pathway through the Arts/Business Quad.

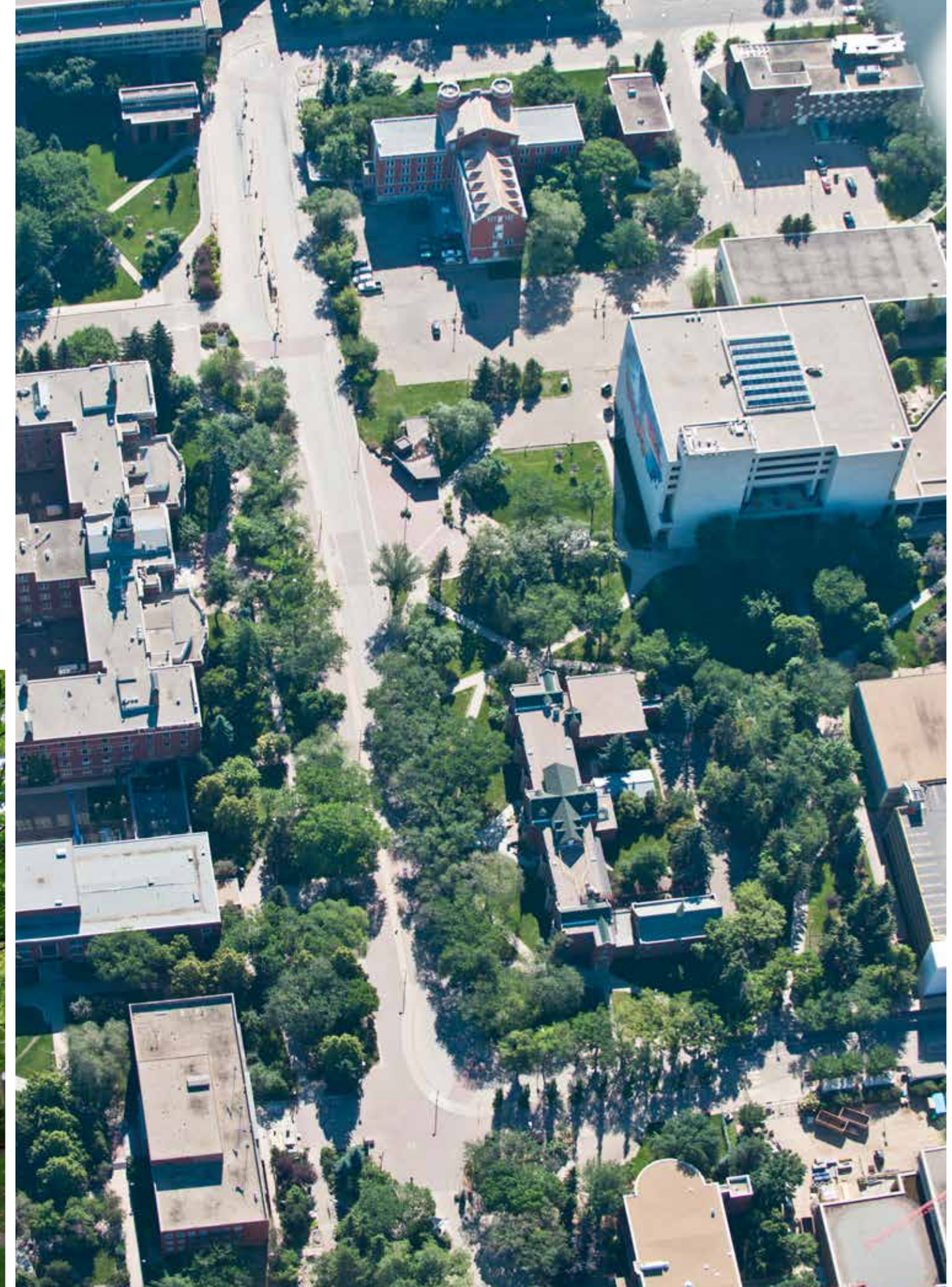


Alumni Walk through the Main Quad.
Source: University of Alberta Facilities and Operations.

Figure 35 identifies the major connections and pathways enhancements proposed for the North Campus that will provide improved corridors connecting major focal points such as the Main Quad, the Arts/Business Quad and the Engineering Quad. The sections below provide a brief introduction to each of the proposed improvements and supporting visual interpretations.

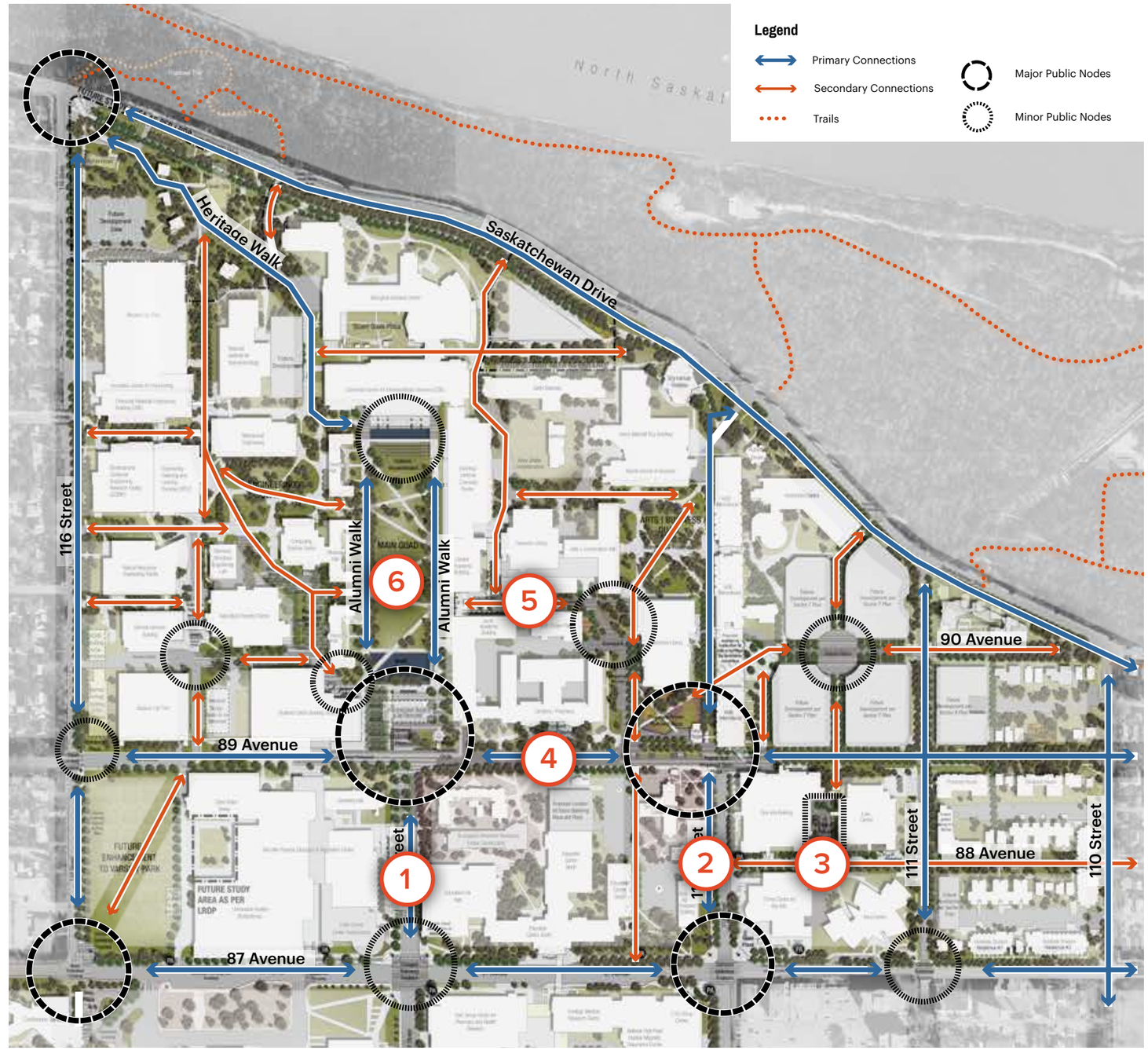
PARK BLOCKS, PORTLAND STATE UNIVERSITY
PORTLAND, OR

The 89 Avenue Promenade is a major connection linkage on the North Campus.
Source: Peak Experience Imagery.



Connections and Pathways – Key Opportunities

Figure 35



Legend

Building Structures

- Existing Building
- Building to be Removed
- Future Development
- Future Study Area

Hard and Soft Surfaces

- Pedestrian Surface
- Vehicular Surface
- Shared Surface
- Pedestrian Woonerf
- Decking
- Water Feature
- Softscaping
- Wildflower Prairie Planting
- Proposed Deciduous Tree
- Existing Deciduous Tree
- Existing Coniferous Tree
- Public Parking
- Public Art
- Campus Gateway Feature

Key Opportunities:

1. 114 Street
2. 112 Street
3. Fine Arts / Law Plaza
4. 89 Avenue Promenade
5. Café Promenade
6. Main Quad Linkage

4.1.3.1 114 Street

The 114 Street corridor north of 87 Avenue serves as a major connection point to the North Campus, for pedestrians, bicycles, vehicles and transit (entering the campus) alike. Its north/south alignment corresponds to the original axis configuration of the Main Quad from the 1912 Block Plan. Over time, this entry corridor and view plane into the Main Quad has been compromised with tree plantings, roadway medians, and the development of the Administration Building. The Open Space Plan proposes enhancements to the corridor to rationalize tree plantings along the boulevards to create a more linear and clear view to the north into the campus from 87 Avenue. The busy nature of this roadway will continue; to better accommodate pedestrians, a larger pathway on the west side of the street adjacent to the new Physical Activity and Wellness Centre and University Hall will improve non-vehicular traffic flows, and lead people into Celebration Plaza.

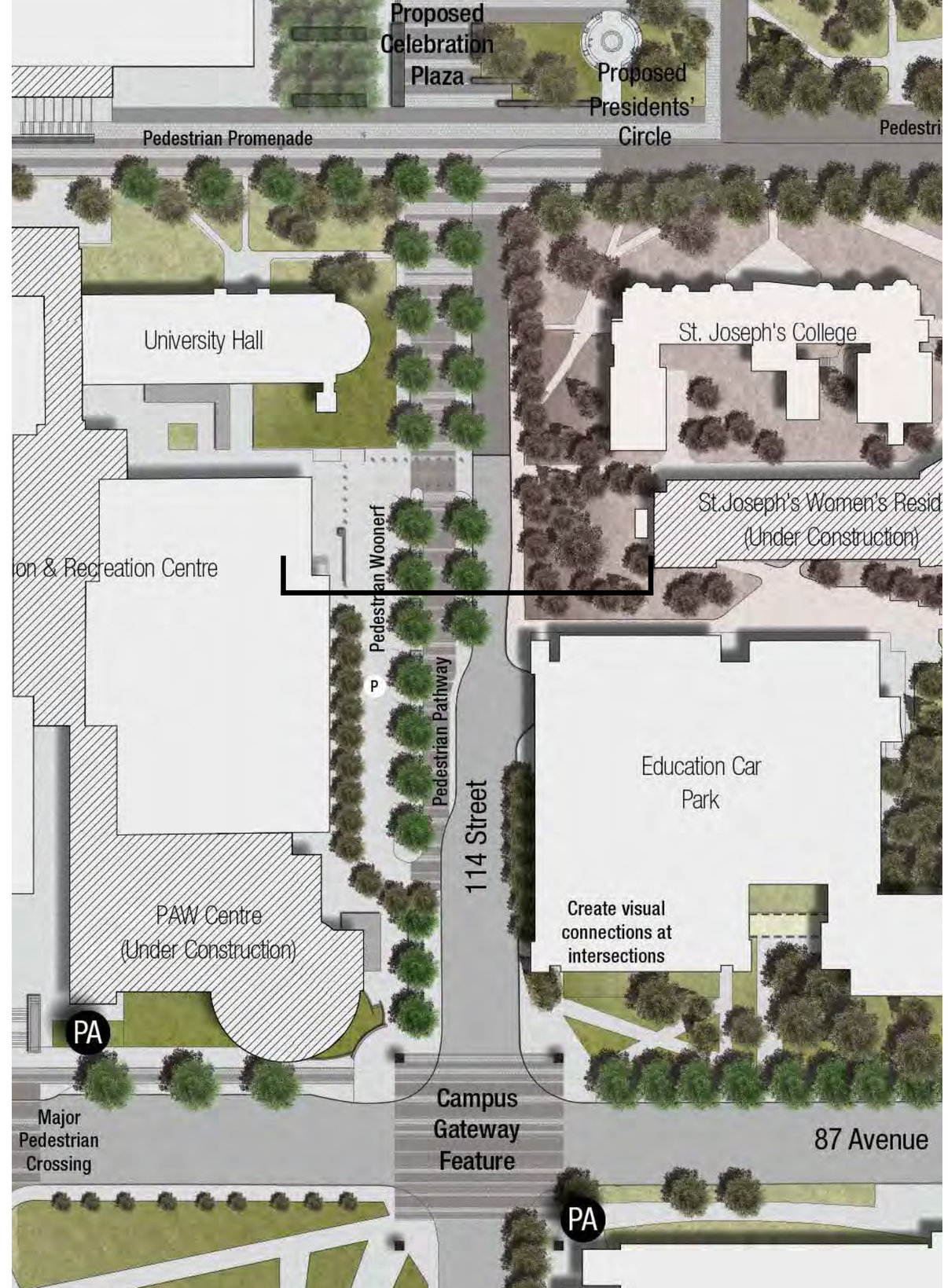


Figure 36: Proposed 114 Street Corridor – Plan View

▲ Figure 37: Proposed 114 Street Corridor Section (looking north)

Green Space | Vehicular Circulation | Pedestrian Circulation | Shared Surface | Bicycle Circulation

WOONERF, BRIGHTON, UK

Major crosswalk features on 114 Street will give priority to pedestrian and bicycle traffic. ▼

JAMISON SQUARE, PORTLAND, OR ▼

4.1.3.2 112 Street

The 112 Street corridor north of 87 Avenue is the second main entry point into the campus from the south, and accommodates heavy traffic flows of pedestrians, bicycles, vehicles and transit (exiting the campus), similar to 114 Street. The corridor terminates at 89 Avenue and the south end of HUB International, and is flanked by the Timms Centre for the Arts, the Fine Arts Building, the Brain and Aging Research Building, St. Stephen's College, and Old St. Stephen's College. The Open Space Plan proposes enhancements to this corridor to create an improved environment for pedestrians and bicycles, while respecting the needs of accommodating vehicle traffic. Existing mono-curb sidewalks will be shifted away from the street to create boulevards and move people away from traffic. The road configuration is proposed to accommodate bicycle lanes in each direction. The intersections at 87 Avenue and 88 Avenue will be upgraded to bring prominence to these pedestrian crossing points. A proposed gateway feature on the east side of the corridor at 88 Avenue will lead people into the extended 88 Avenue Commons corridor that links into East Campus Village and the Garneau community. Enhancements to the plaza area at the Timms Centre for the Arts will create a more inviting gathering space and sense of arrival to the campus.

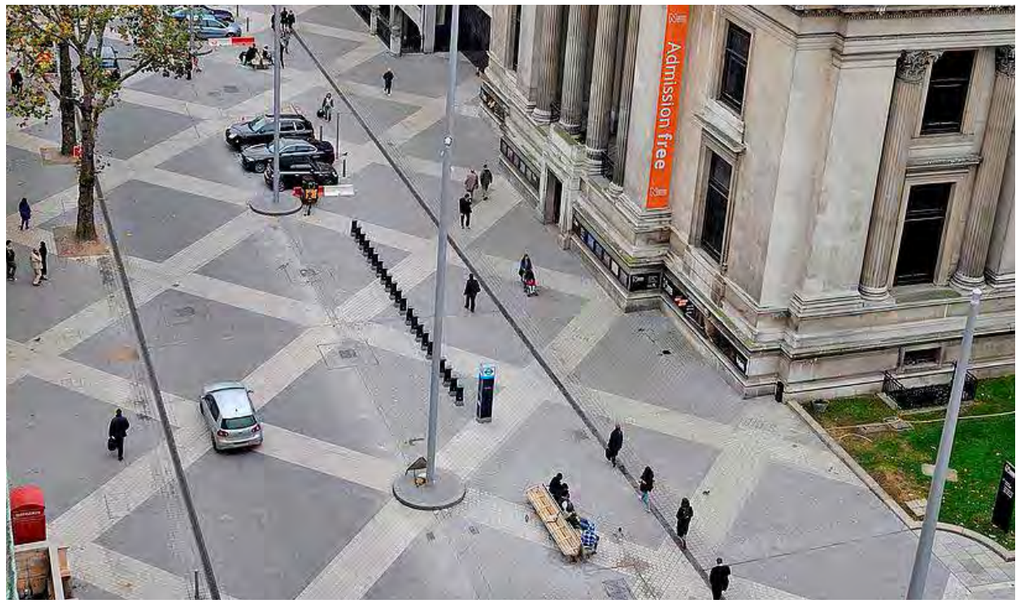
Figure 38: Proposed 112 Street Corridor – Plan View

Figure 39: Proposed 112 Street Corridor Section (looking north) ▲

Green Space | Vehicular Circulation | Pedestrian Circulation | Shared Surface | Bicycle Circulation

EXHIBITION ROAD, LONDON, ENGLAND ▼

EXHIBITION ROAD, LONDON, ENGLAND ▼



4.1.3.3 Fine Arts/Law Plaza

The existing plaza area between the Fine Arts Building and the Law Centre is currently underutilized and in need of refurbishment. It is used informally as a display area for Fine Arts students' sculpture projects. The current configuration does not lend itself well to gathering or seating for people to enjoy the southern exposure of the area or the temporary art installations, and serves as a blockage to pedestrian and bicycle flows through the area. The Open Space Plan proposes to reconfigure this space to create a more formal plaza area that will accommodate better seating opportunities, enhanced landscaping, and installation space for the showcasing of student art projects on a regular basis. The improvements will create better sightlines through the space, and will make it more welcoming for people and bicycles to move across the plaza from the busy 88 Avenue Commons corridor to 89 Avenue.

1 Figure 40: Proposed Fine Arts/Law Plaza – Rendered View

▲ Figure 41: Proposed Fine Arts/Law Plaza - Plan View

LOCUST WALK, UNIVERSITY OF PENNSYLVANIA, PA

Active plaza precedents show the dynamic flows that are captured through flexible public spaces.

▲ **MUSEUM OF MODERN ART SCULPTURE GARDEN,** NY

4.1.3.4 89 Avenue Promenade

The 89 Avenue Promenade extends across the entire campus, serving as the main east/west axis across the grounds from 110 Street to 116 Street, and providing connections to the Garneau community to the east, and the Windsor Park community to the west. The portion of the corridor between 112 Street and 114 Street was enhanced several years ago to create a pedestrian promenade and transit corridor, and still functions well. The Open Space Plan proposes various enhancements along the extent of the corridor to provide more consistency to the alignment, and improve the pedestrian environment and sightlines throughout. A significant improvement proposed is to create a larger pedestrian plaza space in front of the University LRT Station, by shifting bus traffic to the south, to better accommodate the large pedestrian movements in this area. Sightlines along the corridor to the east will be greatly improved by the removal of the staircase/pedway linkage at the south end of HUB International. The enhanced corridor treatments will continue to the east into the East Academic Precinct, creating a consistent promenade all along 89 Avenue to 110 Street.

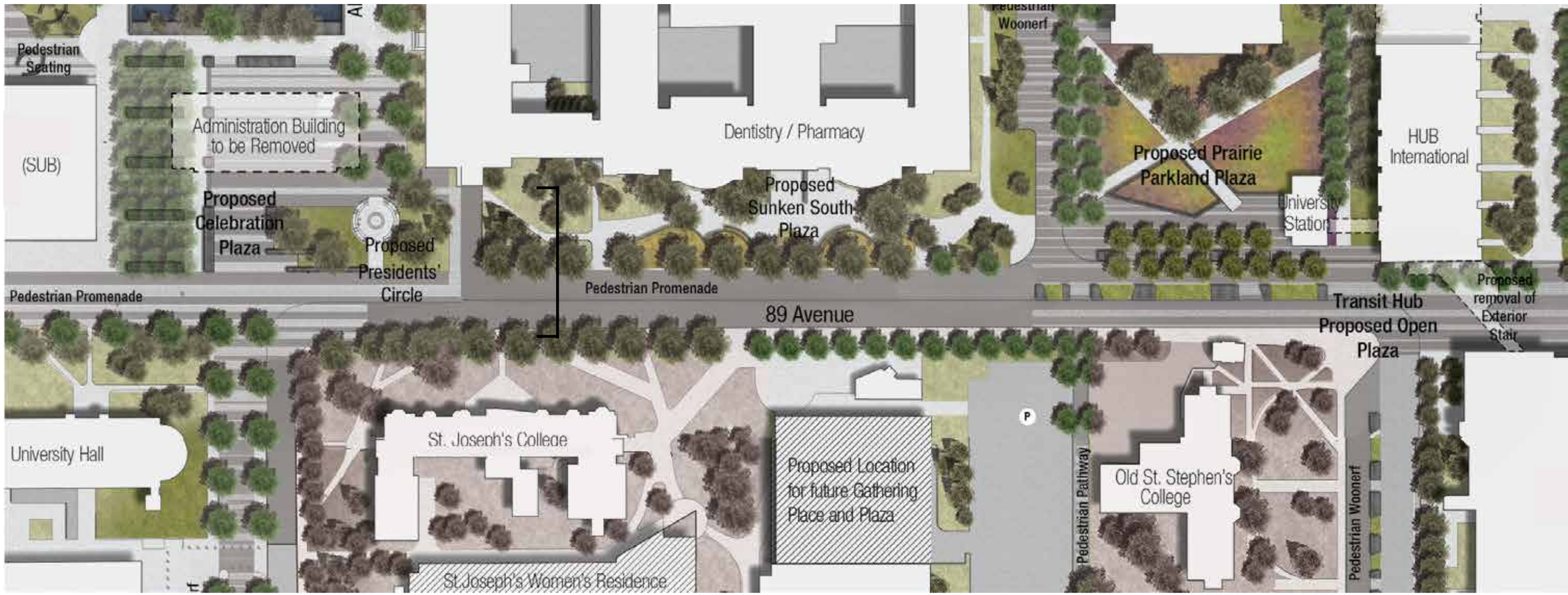
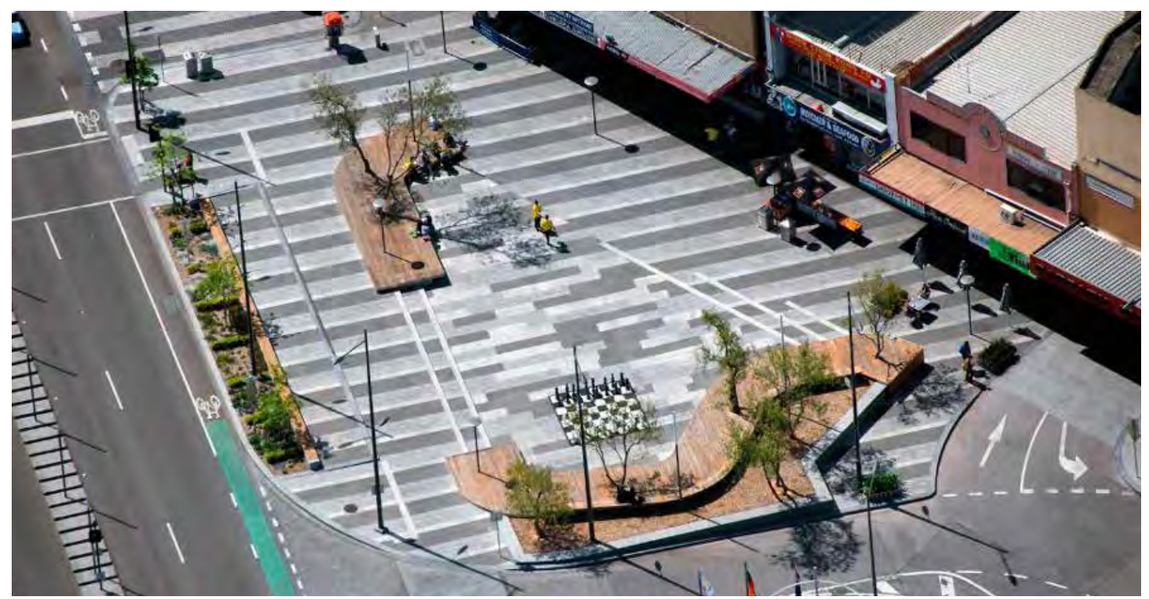


Figure 42: Proposed 89 Avenue Promenade – Plan View (Portion)

▲ Figure 43: Proposed 89 Avenue Promenade Section (looking west)

▼ **LURIE GARDEN**, MILLENNIUM PARK, CHICAGO, IL

▼ **LONSDALE STREET**, MELBOURNE, AU



4.1.3.5 Café Promenade

The Café Promenade area is located from Rutherford Library to Cameron Library, between Triffo Hall and the North Power Plant. A well-used pedestrian/bicycle connection, this space enjoys significant character provided by the old buildings and the mature tree canopy. The use of the North Power Plant by the Graduate Students' Association for the Dewey's restaurant provides a good source of activity for the space; however, the area is not well-lit at night, which poses safety issues. The Open Space Plan proposes to enhance this space to create an improved pathway, while accommodating additional seating and patio areas that will make it a destination on campus. The mature tree canopy will be preserved, and additional lighting will help to make the space feel safe and secure in both the day and evening hours. The space can often be windy, so protection from wind should be considered for any outdoor seating areas. The space is envisioned as a true gathering and socializing location for students, staff and visitors alike, while facilitating connections to and from the Main Quad to the west and the Arts/Business Quad to the east.

▲ Figure 44: Proposed Café Promenade – Plan View

Figure 45: Proposed Café Promenade – Rendered View 1

WOONERF, BRIGHTON, UK

LEVINSON PLAZA, MISSION PARK, BOSTON, MA

Enhanced open space area for relaxation, taking advantage of southern exposure and mix of shade trees.

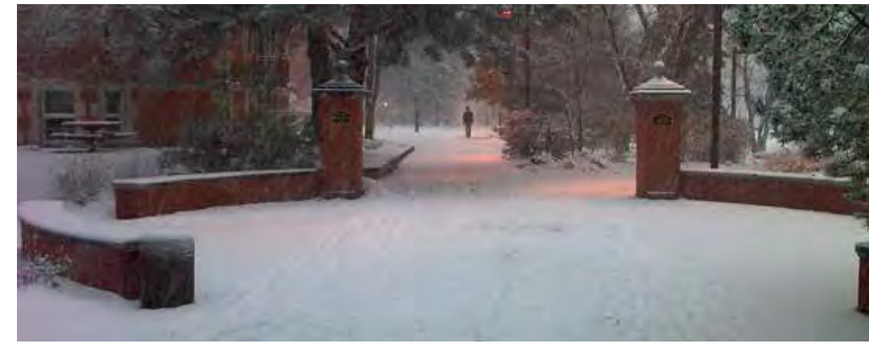
LONSDALE STREET, MELBOURNE, AU

Opportunity for outdoor seating areas for socializing and supporting food establishments.

4.1.3.6 Main Quad Linkage

The proposed Main Quad Linkage is found between the Central Academic Building and the South Academic Building, on the east side of the Main Quad. At present, the area is characterized by a steep staircase that drops below a pedway linkage that connects the two buildings. The staircase is in poor condition, and the pedestrian environment below the pedway presents as one of the least desirable areas on the North Campus. The Open Space Plan proposes significant improvements to the space to create an enhanced pedestrian/bicycle environment, while facilitating better access to and from the Main Quad. Recognizing the large grade change from the Main Quad to the pedestrian level between the buildings, the Plan proposes to retain a staircase feature, but redeveloped with a much more gradual slope (while still accommodating wheelchair ramp access) that will create a social staircase gathering area. The removal of the pedway linkage between the two buildings (in favour of a below-ground connection) will open the space and provide clear sightlines towards the Café Promenade area to the east. The enhanced connection and staircase will provide a better entrance to the Main Quad and facilitate pedestrian movements across the space to the proposed Open-Air Market area to the west.

University of Alberta Alumni Circle
Source: University of Alberta Facilities and Operations.



88 Avenue Commons, East Campus Village
Source: University of Alberta Facilities and Operations.

ARTS QUAD, CORNELL UNIVERSITY, NY

Figure 46: Proposed Main Quad Linkage – Plan View

4.1.4 Seasonality and Around-the-Clock Use of the Landscape

Edmonton's setting as a northern city presents both opportunities and challenges to encouraging year-round activity on the North Campus, including throughout the day and evening hours. The campus has a wonderful landscape setting that features a diverse mature vegetation environment, pathways, open spaces, and other assets that attract users, particularly in the summer months. However, the majority of students experience the North Campus during the fall and winter months, with many arriving in September as fall begins, and leaving the campus in April just as spring is emerging. As a result, a minority of students actually experiences the campus when it is at its most attractive.

As is often the case in northern climates, the tendency is to wind down activity during the long winter months and focus on staying inside to avoid the cold temperatures, snow, and short days. Many northern cities, Edmonton included, are now focusing on the opportunities winter can provide for a different, but still enjoyable, experience to complement the summer months. The objective is to not hide from the winter weather, but to embrace it and facilitate a campus experience that provides a means to do this, particularly given the University's growing international student population, many of whom have not experienced living in a northern climate like Edmonton's before.

The Open Space Plan conceptual components consider year-round usage of the North Campus landscape, and include design elements that also facilitate both day and night activities to encourage a safe and vibrant campus community.

"Suicide" slide in the river valley, circa 1924.
Source: University of Alberta Archives, UAA 72-56-42.

The Main Quad has been the site of many winter activities over the years, such as this broom ball game in the mid 1970s. Source: University of Alberta Archives, UAA 88-77-3-12-29.

ENCOURAGING ACTIVITY

- During the winter months, the snow on the North Campus should be seen as a resource that can be used to support outdoor activities, such as snow sculpturing or mounds for sliding and tobogganing.
- Space for outdoor skating areas can provide an activity draw and gathering area in winter, and serve as water amenities in the summer months.
- Eating and drinking services on the campus should be encouraged to provide outdoor seating areas that have amenities to support this kind of use during the winter months (e.g. outdoor heaters, tables and chairs available year-round). The provision of sheltered areas in the sun can significantly increase use during the "shoulder months" in spring and fall.
- To facilitate activity, the University should consider a greater risk tolerance and develop an understanding of shared responsibility with campus users regarding outdoor activities in the winter.
- Snow removal activities should not impair movement on pathways and bicycle routes, and priority should be given to these corridors for snow removal before roadways are cleared.
- Partner with the City of Edmonton and adjacent neighbourhoods to play an active role in supporting winter activities that may be occurring in the wider community.

APPROPRIATE DESIGN

- The University widely uses above-grade pedways to facilitate movement on the campus in the winter months; while convenient, and welcome on particularly cold days, these facilities remove activity from the ground level, where the campus amenities exist.
- A focused effort to make outdoor walkways, pathways, courtyards, and other gathering spaces sheltered from the prevailing winds and winter weather will encourage more outdoor movements between campus buildings and open spaces.
- Given the shorter days and longer nights during the winter months, the effective use of lighting on the campus can create a more inviting landscape; this can be in the form of traditional light standards, but also in a more architectural sense, with creative architectural lighting for buildings that may also light the grounds, and the use of lighting in other landscape features, around seating areas.
- Iconic buildings and other landmarks on campus can use lighting to enhance their presence on the campus during the longer nights in the winter months, such as the recent lighting installation in the upper levels of HUB International.
- The use of colour in the campus vegetation palette is also important given the dramatic change in the deciduous plantings during the winter months; vegetation should be selected that provides additional colour and visual interest to those on campus in the fall and winter months. Examples, among many others, are red-stemmed dogwoods, mountain ash, and crabapples that have ornamental fruit that is persistent throughout the winter.

Sustainable Landscape Strategies

Section
Five

140 5.1. Building Placement, Planning and Design
141 5.2. Hard Landscape Materials and Resources
142 5.3. Vegetation Renewal and Restoration
143 5.3.1. Urban Forest Management and Vegetation Enhancement
144 5.4. Design for Safety and Security
145 5.5 Operations and Maintenance
146 5.6 Water Management
147 5.6.1 Stormwater Management and Low Impact Design
148 5.6.2 Irrigation and Water Use

Strategies for the design and long-term management of the campus open space are needed to ensure that the values, services and enjoyment provided by the landscape are maintained over time. The following landscape strategies will inform design approaches, construction practices, as well as the long-term operations, maintenance and management of the North Campus. The strategies are generally aligned with the Sustainable Sites Initiative SITES framework (refer www.sustainablesites.org for greater detail). Over time, the implementation of these strategies across all development projects will transition the campus to a more sustainable landscape, both fiscally and environmentally. These strategies also inform a checklist of considerations for all development projects that could impact the campus landscape. (Appendix 1)

The strategies include:

- Building Placement, Planning and Design
- Hard Landscape Materials and Resources
- Vegetation Renewal and Restoration
- Design for Safety and Security
- Operations and Maintenance
- Water Management

A strategic approach is required to the long-term development and management of the open space network.

Source: Peak Experience Imagery.

5.1 Building Placement, Planning and Design

Appropriate site selection for future development projects is a key consideration that influences the optimization of a project. As development on the campus has increased, so has the pressure to infill open space with new buildings. While new building sites will be required in the future (several are identified in the LRDP), care must be taken to ensure the form, function and connectivity of the landscape is not compromised. The landscape and the architecture must be considered in an integrated manner, so as to ensure the exterior spaces created are functional and not merely left over spaces. Sites selected for development should be consistent with the objectives set forward in the LRDP and the Open Space Plan.

Goals and design strategies:

- Protect the valley forest north of Saskatchewan Drive. Do not build permanent structures in this zone
- Enhance connectivity between existing campus buildings, public transit facilities and other campus destinations
- New facilities should be located on previous development sites wherever possible
- Avoid siting new buildings on important campus open spaces
- Future capital building projects should ensure adequate consideration and funding of required adjacent landscape enhancements
- Conduct a pre-design site assessment to explore opportunities for site sustainability at new and potential construction sites
- Enhance access to existing infrastructure, public transit, campus amenities, servicing, complementary adjacent programming, and inter-building connectivity
- Orient exterior spaces associated with new buildings – such as entry plazas and courtyards – to maximize solar exposure and protect spaces from prevailing winds
- Use design checklist (Appendix 1) for all new projects

The careful placement of the original buildings on the North Campus has resulted in a high-quality landscape. Source: Peak Experience Imagery.

Choices in landscape materials can set the tone for how a space is used and enjoyed.

The proper integration of new buildings with the adjacent landscape is critical to enhancing the campus.

5.2 Hard Landscape Materials and Resources

Durability, resource efficiency, and waste management should be considered in the selection of hard landscape materials. Production of highly processed composite products, distant from the site of actual use is common, and has impacts directly through resource extraction, and indirectly through waste and pollution, particularly in transit. Many landscape construction materials and products have remained more local than building materials, and several manufacturers of site elements are using more recycled, reclaimed, and durable materials.

Generally, regionally-produced materials that are durable, require minimal maintenance, and are recyclable or reusable are favoured over materials imported from remote areas that will have a shorter life span and limited ability to be reused or recycled. Certified wood, cast-in-place concrete, and precast concrete are regional materials with low embodied energy, high durability and recyclability, and require minimal maintenance. The selection of appropriate site materials should include consideration of the following:

- Durability
- Recycled and reclaimed content
- Recyclability
- Location of raw material extraction
- Location of material production
- Renewability of raw materials
- Toxicity of products
- Maintenance requirements
- Deconstructability of structures and elements (to allow for recycling or transport)
- Embodied energy of materials
- Water use in extraction, manufacture, use, and disposal
- Corporate practices of companies related to sustainability
- Character and appropriateness of materials in the context of the campus

New development on the campus must respect and integrate with the existing mature tree canopy.

5.3 Vegetation Renewal and Restoration

Vegetation contributes significantly to the overall identity and character of the North Campus as well as providing habitat, climate control, stormwater management, and other ecosystem services. With the exception of the Valley Forest north of Saskatchewan Drive, almost all areas on campus are dominated by mature anthropogenic species.

Age class distribution is largely limited to older classes and long-term renewal of the mature landscape has not been fully considered. Vegetation management in the future needs to move toward a more sustainable approach of constant renewal and increased diversity. While the horticultural heritage that remains on campus since the University was established will be maintained, other areas should evolve toward a more ecological approach to vegetation renewal and maintenance, including the use of native plants communities. Much of the existing vegetation on campus should be preserved with the species and planting style of the original designs maintained. This is particularly true of the heritage core of the campus where mature large canopy trees dominate. In other areas, the use of more native plants should be considered with the goal of reducing water use, long-term maintenance and restoring habitats on campus.

Strategies for vegetation on campus focus specifically on tree management as a means of managing the campus canopy, and on vegetation restoration as a means of restoring native plants and ecosystems to the campus. The University should consider the adoption of a formal urban forest renewal program, which would assess the campus trees on an annual basis to determine removal and replacement of trees that have reached the end of their lifespan.

Mature elm trees on campus contribute to a meaningful sense of place. Renewal of this significant resource requires strategic planning. Source: Spacing.ca

5.3.1 Urban Forest Management and Vegetation Enhancement

The following are goals and strategies to support the management of the Campus Urban Forest:

- Diversify the age class distribution and species diversity of campus vegetation
- Develop and maintain a detailed Master Vegetation Database for the campus. The database/inventory should include all trees and major shrub beds, including information pertaining to location, species, age, size and condition. Management history (i.e. pruning, irrigation status, fertilization etc.) should also be included. Updates to the Master Vegetation Database should occur regularly
- The database will support the development of a long term Detailed Vegetation Management Plan and will provide a useful long-term indicator of environmental health of the campus
- Develop a Native Plant Restoration Plan for the campus. The plan will identify areas of natural significance on campus that should be protected and actively managed as well as areas that can be restored to native species. The plan will serve to develop a long-term management plan and help to target areas that can be used in compensation projects
- Create new biodiverse habitats on campus. Protect, preserve, and enhance remaining remnant native ecosystems and natural areas, particularly in the Valley Forest
- Limit the use of horticultural turf to those areas with programmatic requirements (athletic fields, quads, greens, and high use areas)
- Subject to resources being made available, preserve and protect existing trees with all reasonable effort through regular maintenance including pruning and pest control
- The removal of existing trees must be carefully considered and documented through the Design Checklist and review process
- Adopt a formal urban forest renewal program to assess how trees reaching the end of their lifespan will be removed and replaced
- Limit tree removal to those meeting the following criteria: diseased or dead trees; trees that constitute a safety hazard; trees determined to be an obstruction and a hazard to utility lines; or trees that unduly interfere with the construction of new facilities
- Removed trees shall be replaced with an appropriate equivalent species at a ratio commensurate with the value of the removed tree, as defined by the International Society of Arboriculture. For example, a valuable tree should be replaced at a 1:1 ratio, meaning a 600mm caliper tree will be replaced with six 100mm caliper trees. Secondary trees should be replaced at a 1:0.5 ratio
- Removed trees should be reused for other purposes where feasible
- Tree replacement may also include the restoration of native ecosystems that do not include trees, but enhance campus biodiversity and habitat
- Prioritize the use of native tree, shrub, forb and grass species endemic to the Central Parkland Natural Sub-Region and adaptive vegetation that is drought tolerant and easily maintained
- Correlate maintenance regimes with priority campus spaces to ensure efficient use of maintenance resources
- Establish a diversity of plant communities native to the Central Parkland Natural Sub-Region
- Create green infrastructure such as stormwater treatment wetlands, bioswales, rain gardens, and green roofs that will enhance biodiversity and ecological functioning
- Reduce and replace impermeable surfaces with plantings, where appropriate

The varied urban forest of the North Campus provides a key benefit during the winter months.

5.4 Design for Safety and Security

The University of Alberta must first and foremost be a safe environment for students, staff and visitors. Over a century of research supports the hypothesis that crime can be reduced through informed design. (Sundberg, 2013) The planning and design of the physical environment greatly impacts individual behavior, and properly undertaken, can deter potential offenders from committing crime. The University should adopt principles of Safe Design in the planning of campus spaces with the aim of promoting public safety and security. The Open Space Plan strives to guide the design of exterior environments by promoting universal accessibility, feelings of safety and security, and clearly legible wayfinding on campus. Design considerations that support a safe campus environment are important across the site. The following goals and design strategies outline targets and principles to guide safe design on campus.

Goals and design strategies:

- Introduce way-finding devices such as signage, banners, public art, and lighting to define major and minor routes
- Ensure adequate light levels are provided in all public spaces in accordance with the Illuminating Engineering Society's Guideline on Security Lighting for People, Property, and Public Spaces
- Provide safe and legible access to cycling infrastructure
- Design all new exterior spaces utilizing the strategies of Crime Prevention Through Environmental Design (CPTED) or the SAFE Design Council
- Undertake a safety audit of the campus with respect to the strategies of CPTED or SAFE Design
- Adopt maintenance practices, such as pruning, that exhibit a level of care and ensure clear sightlines
- Ensure prompt and timely maintenance is undertaken to repair damaged or vandalized site elements, walls etc.
- Implement a cigarette butt recycling program on campus that encourages butts to be disposed of in receptacles
- Provide a clear and well lit pedestrian route around the campus perimeter to support running events on campus
- Consider access to daylight and exterior views when designing new buildings and retrofitting existing buildings. Eyes on the spaces where crime could occur is key to prevention
- Design and program spaces for activity and people-filled experiences. Encourage food trucks, farmer`s markets, and community events by providing space and infrastructure requirements
- Ensure emergency access routes are designed to facilitate access while also creating a high-quality pedestrian environment where routes are within the pedestrian realm
- Reduce pedestrian, vehicle, and cyclist conflicts through clear, legible design standards
- Define a clear hierarchy of pathways to facilitate way-finding

Please refer to the SAFE DESIGN COUNCIL for additional details. (www. safedesigncouncil.org)

▲ The underpass between CAB and SAB is an undesirable space. It is dark, confined, and has obstructed sight-lines.

▲ Low plants and high headed trees create open sight-lines, increasing visibility and enhancing feelings of safety.

5.5 Operations and Maintenance

The University of Alberta is operating under increasingly challenging budgets and has limited resources to maintain the campus landscape. There are many prominent existing areas and newly constructed areas that are not able to receive the optimum level of attention required to ensure plants are healthy and able to thrive. In many areas, hard landscape features need upgrades and maintenance. The reduction in resources for both hard and soft landscape maintenance provides a serious challenge to the renewal and upkeep of the overall campus landscape. Strategies are needed to deal with shortfalls in funding and to protect the significant investment in the existing landscape.

Vegetation restoration and renewal strategies have a great deal of influence on operations and maintenance. By moving away from a horticultural approach in some areas, it should be possible to reduce maintenance requirements. Restoration of natural vegetation systems can, in the long run, reduce overall maintenance, replacing traditional maintenance with an approach based on stewardship and stand or plant community management. While lowering long term costs, ecological restoration requires significant input in the first 3 to 5 years to establish native plants and grasses.

However, the number of areas that can be converted to more natural plant communities is limited and the majority of the campus, at least in the mid term, will continue to need ongoing maintenance of turf, shrubs and trees. In addition, several high-use open spaces will continue to require a high level of maintenance. The following are suggestions to improve maintenance efficiencies.

Goals and design strategies:

- Undertake a Maintenance Feasibility Study to determine the required resources to sustain the campus at various levels of maintenance
- Assign appropriate levels of maintenance to all areas of campus. Continue to use the Association of Higher Education Facilities Officers (APPA) facilities maintenance program to guide operations and maintenance activities across campus. This approach defines six levels of service ranging from Level 1 – State of the Art Maintenance to Level 6 - No Maintenance
- Aim to limit areas on campus that require high levels of maintenance to those in primary use areas, such as quads, greens, and courtyards
- Train Grounds staff members in native plant identification, establishment, and management practices
- Use an adaptive management approach to landscape maintenance, reviewing and monitoring the landscape to inform future management requirements rather than taking a blanket approach to campus maintenance
- Maintenance levels should be considered in all stages of planning and design of new projects
- Design snow storage areas in all projects to minimize impacts to vegetation and reduce runoff
- Require that a maintenance guide be prepared by landscape architects and engineers for all projects outlining the activities, timelines, equipment, and personnel necessary over the short term to achieve the ultimate desired outcomes in the long term
- Maintain an Integrated Pest Management approach to managing landscape pests such as invasive plants, insects, and disease

Horticultural turf is the most common ground cover on campus.

The Illinois Institute of Chicago has been replacing expanses of horticultural turf areas with low maintenance grasses.

Snow clearing and storage on campus must be a significant consideration for all new projects. Source: University of Alberta

5.6 Water Management

The interrelationship of climate, vegetation, soils, rainfall, topography, stormwater, and supplemental irrigation must be addressed collectively in the context of creating more sustainable and healthy landscapes. This section presents strategies and principles designed to limit or reduce the use of potable water for landscape irrigation. The following strategies incorporate rainwater, stormwater, and grey water as assets for onsite reuse. Design principles, strategies, and targets have been drawn from a variety of sources, including the Sustainable Sites Initiative Guidelines and Benchmarks (2009).

Water features on campus are great amenities but currently utilize potable water. Retrofitting to help manage stormwater will enhance campus sustainability.

Green roofs can reduce stormwater runoff and heat island effect, as well create unique social spaces. Source: ASLA

Stormwater management facilities can add aesthetic value to the campus landscape.

Bioswale construction. Bioswales can be retrofitted into the existing campus landscape to encourage stormwater infiltration.

5.6.1 Stormwater Management and Low Impact Design (LID)

Currently, the majority of stormwater on campus is managed by traditional collection and conveyance through an underground stormwater pipe network which ultimately outfalls into the North Saskatchewan River. An Integrated Water Resource Management Plan (IWRMP) should be undertaken on campus to holistically plan and design for water systems within buildings and the landscape. In the landscape, IWRM deals with the interrelationship between vegetation, soils, rainfall, topography, stormwater, and supplemental irrigation. Buildings can be incorporated by integrating water capture, treatment, and reuse for internal building functions, as well as treating grey water and black water onsite. Collaboration with the Faculty of Engineering should be considered in order to have the stormwater management system support both the Faculty curriculum and research.

Goals and design strategies:

- All new development and redevelopment projects should incorporate and advance IWRM strategies on campus
- Manage all sites with watershed values in mind (e.g. reduce use of salts, fertilizers, pesticides, construction sedimentation)
- Treat all water, including stormwater, as a resource
- Where feasible, reduce impervious surfaces and maintain continuous vegetative cover. Preserve and restore remnant natural areas
- Develop stormwater retention and detention facilities where possible
- Achieve net zero contributions to stormwater runoff for all new buildings, where feasible
- Retrofit existing parking lots to reduce loads on municipal infrastructure by enhancing infiltration capacity and installing stormwater capture infrastructure for reuse
- Establish numerous small bio-retention areas throughout campus
- Implement a stormwater management public relations program that conveys the University's intentions and achievements
- Design stormwater management facilities to provide high-quality, environmental and aesthetically-pleasing amenities in addition to their functional requirements
- Work with the Faculty of Engineering to develop curriculum-based learning opportunities
- Reduce potable water use for irrigation*
- Calculate the average monthly evapotranspiration and rainfall amounts for the campus' peak watering months (month of highest evapotranspiration, when plants require the most water)*
- Calculate the Baseline Water Requirements and the Designed Landscape Water Requirement of the campus*
- Estimate the volume of non-potable water sources, including rainwater, stormwater, gray water, and wastewater, available for onsite irrigation reuse*
- Calculate the designed landscape's percentage reduction in potable water use from the baseline case*
- Reduce the use of curb and gutters to allow runoff to flow into adjacent vegetated areas
- Harvest rainwater for reuse in buildings and for irrigation
- Reduce stormwater volumes and replenish groundwater through the use of bioswales, infiltration beds, rain gardens/pockets, bio retention areas, and other low impact development strategies
- Reduce impervious surfaces by minimizing road widths, parking areas, traditional roofs, and utilizing permeable pavements where appropriate

* Please refer to the recommended targets for potable water use reduction based on the calculated Baseline Landscape Water Requirement cited in the Sustainable Sites Initiative SITES framework

5.6.2 Irrigation and Water Use

The campus landscape is sustained through an extensive irrigation system network that is operated and maintained by the University's Buildings and Grounds Services Department. Under the Integrated Water Resource Management model, irrigation and stormwater management are highly interrelated systems. The campus should move toward a more integrated system that utilizes captured stormwater for irrigation, directs runoff to vegetated areas, and incorporates more drought tolerant and native plant species.

The University has also developed six water features on the North Campus that contain a pond and running streams. In each case, water recirculates through bio-filters, which eliminates the need for chemical algae control. The water features attract a variety of waterfowl and other birds who frequent the cooler temperatures generated by the flowing water. Fish have also been added to some of the water features. The plant material used is drought-tolerant, and requires little artificial irrigation. The water features have become popular gathering places for students, staff and visitors to the campus.

Goals and design strategies:

- An Irrigation Plan should be undertaken to inventory and analyze existing campus irrigation systems
- Recognizing the Buildings and Grounds Services department`s current operating capacity, remote irrigation operations should be explored
- The irrigation plan should be coordinated with the Integrated Water Resource Management Plan (IWRMP) to optimize proposed stormwater infrastructure for irrigation purposes
- The portion of the campus landscape requiring supplemental irrigation should be balanced with the amount of rainwater or recycled water available
- Irrigated areas should be focused on priority campus spaces and sports fields
- For all new development, the existing irrigation system must be identified prior to commencement of construction and provisions made to maintain system function to adjacent areas as required
- Continue to select efficient irrigation systems
- Reuse non-potable water sources on site for irrigation by incorporating rainwater harvesting, grey water reuse, and stormwater treatment into design solutions. Use air conditioner condensate and blow down water from boilers and cooling towers where possible
- Install flow meters to record and monitor water use in landscape irrigation areas
- Continue to monitor the site's landscape coefficient to determine if a site's water conservation goals are being met or exceeded. The landscape coefficient is a constant used to modify the reference evapotranspiration of a site, taking into account species, density, and microclimate factors
- Monitor site groundwater quality to determine the level of pollutants entering the system from onsite materials or processes
- Maintain records (reports, photos, etc.) detailing the implementation, inspection and maintenance of all temporary and permanent controls and practices

The Sidwell Friends school utilizes on-site sewage treatment, water re-use, and water efficient native plants to reduce the school's water consumption by 93 percent.
Source: ASLA

BRUEL-DELMAR ARMENT PUBLIC SPACE, ARMENTIERES, FRANCE

TANNER SPRINGS PARK, PORTLAND, OR

Plan Implementation

Section Six

153 6.1. Integration with the Long Range Development Plan and Sector Plans
154 6.2. Infrastructure Considerations
155 6.3. Investment in the Landscape
156 6.4. Governance Considerations
157 6.5 Integration with Campus Development

The implementation of the North Campus Open Space Plan will require ongoing commitment from the University over a number of years. Effective implementation of the Plan will also be dependent on an effective coordination with activities related to the Long Range Development Plan and the Sector Plans. It is imperative that initiatives stemming from all plans are undertaken with a full understanding of the design requirements from both a development and landscape point of view.

The proposed enhancements outlined in the Open Space Plan involve both landscape-specific projects, but also improvements that are directly complementary to new buildings. The elements identified in Section 4 of the Plan are conceptual opportunities that could be considered for areas of the North Campus over time. The following section outlines an approach to effective implementation of the proposed open space initiatives.

Open space area adjacent to historic Corbett Hall.

New development on the North Campus can contribute to an enhanced open space network.

6.1 Integration with the Long Range Development Plan and Sector Plans

As outlined in Section 2, the University's Long Range Development Plan (LRDP) and the various Sector Plans for sub-areas of the North Campus provide direction on future open space sites, buildings, connections, and other landscape elements. Other policies and documents, such as the 2012 – 2016 Sustainability Plan and the Preservation of University Facilities and Grounds Policy, also provide direction that will need to be considered through ongoing implementation of the Open Space Plan.

New building developments and related amenities cannot be undertaken in isolation of how these projects will support and integrate with the broader landscape. Conversely, open space projects must be undertaken with respect to the future development and building requirements outlined in in the Long Range Development Plan and applicable Sector Plans.

It is recommended that any future review or amendment to the LRDP should take into consideration the direction provided in the Open Space Plan. If amendments to the LRDP are made, amendments to the Open Space Plan may be required to ensure consistency between the plans. Similarly, any future review or amendment to an existing Sector Plan should also consider the Open Space Plan; the preparation of any new Sector Plan for the North Campus should be undertaken in direct reference to the Open Space Plan.

6.2 Infrastructure Considerations

Infrastructure renewal must be coordinated with existing and contemplated landscape development. Access to deep and shallow services must be maintained in an efficient and pragmatic way. Where feasible, infrastructure should not be located under tree plantings. However, that is not always possible and new designs and techniques (including directional drilling and sleeving) for integrating vegetation into utility corridors, complete streets and service lanes should be considered. The potential for green infrastructure to contribute to low impact stormwater management (bio-swales, green roofs etc.) should be valued and roadway design should routinely incorporate improvements to the open space and public realm. Electrical and other utility line assignments should consider the priority and protection of trees and other landscape elements.

Infill development on the campus requires consideration of how it will be integrated into the landscape.

Development of new facilities on the North Campus often has impacts on the open space network.

6.3 Investment in the Landscape

A conservative estimate of the value of only the trees on campus (shrubs and ground covers excluded) is over $22,500,000 (assuming 4500 trees with an average cost of $5,000). Hard landscape and irrigation values are millions more. However, the contribution of the landscape to the academic and cultural activities of the University cannot be captured in a monetary valuation. The importance and value of the campus open space is increasing over time, as vegetation matures and development encroaches.

Open spaces need to be used and maintained. Resources need to be directed to the landscape or its value and usefulness to the University will be diminished. Operating and maintenance budgets need to rise to avoid an ever-increasing deferred maintenance deficit. With increased development and a rising University population, together with amplified pressure on remaining open spaces, capital budgets for landscape improvements are needed. It is suggested that with each new development a 5% capital cost allowance be included for landscape improvements, both at the immediate development site, as well as for in other areas of the public realm throughout campus.

The campus landscape is highly valued by staff, students and visitors alike. This value must be recognized by long term consistent investment if the many benefits afforded by the landscape are to be maintained in a sustainable fashion.

The open space landscape of the North Campus is one of its most critical assets, both from a capital perspective, and a symbolic perspective.

6.4 Governance Considerations

The Open Space Plan will function as a key planning and development document in the ongoing enhancement and growth of the North Campus. While the preparation of the plan is not a requirement of the *Post-Secondary Learning Act* (unlike the LRDP), it is nonetheless one of the University's key long-range visioning documents. The Open Space Plan will be considered as a stand-alone companion document to the LRDP, given the interrelationship between campus development planning and open space design, and should be referenced for land use and development decision-making and design processes.

To facilitate effective implementation of the Open Space Plan, it should be referenced and used as a guide in the preparation of proposed development designs for the campus. This would apply in the case of the preparation of amendments to existing Sector Plans, or the preparation of new Sector Plans, as referenced above. It would also apply to the preparation of development design concepts for specific buildings or facilities on the campus. University staff involved in conceptual design or design-build exercises should consult with Facilities and Operations staff to determine open space, landscape, and linkages requirements that may be identified in the Open Space Plan.

The ongoing development and enhancement of the open space network will require support and collaboration.

6.5 Integration with Campus Development

The following are potential key open space projects for the North Campus that should be integrated into campus development planning. They are listed in no particular order relative to priority and should be considered as financial and other opportunities arise:

6.5.1 Key Projects

1. Gateway Plaza – 116 Street and Saskatchewan Drive
2. Heritage Walk – from Ring Houses to Rutherford House, via Alumni Walk/Main Quad, 89 Avenue Promenade, and Arts/Business Quad
3. River Valley Promenade – Saskatchewan Drive from 116 Street to Rutherford House
4. West Campus Promenade – east side of 116 Street, from 87 Avenue to Saskatchewan Drive
5. 87 Avenue Intersections – at 112 Street, 114 Street and 116 Street
6. Prairie Parkland Plaza and University Station entrance – on 89 Avenue Promenade
7. Outdoor Amphitheatre – north end of Main Quad adjacent to Centennial Centre for Interdisciplinary Science
8. Main Quad/Alumni Walk – general enhancements for the space and Alumni Walk on west and east sides of the Quad
9. Celebration Plaza/Presidents' Circle – south end of Main Quad
10. Open-Air Market – north of Students' Union Building and east of Agriculture Forestry Centre
11. 114 Street Corridor – north of 87 Avenue to Celebration Plaza
12. 112 Street Corridor – north of 87 Avenue to HUB International/University Station
13. Fine Arts/Law Plaza – between Fine Arts Building and Law Centre
14. 89 Avenue Promenade – various improvements from 110 Street to 116 Street
15. Café Promenade – corridor between Triffo Hall and North Power Plant
16. Main Quad Linkage – linkage between Cameron Library and Agriculture Forestry Centre
17. Varsity Field redevelopment
18. Future addressing and honourific naming program (campus-wide)

Appendix 1

Proposed
Design Checklist

HUB

Proposed Design Checklist

Site Selection, Planning + Design

Land-use efficiency should be maximized. New developments should accommodate the greatest program possible and be undertaken with a clear vision of how the entire site will be developed.

- Does the proposed development utilize the site's full potential?
- Can the potential site accommodate a greater program? If so, can the site be built in a manner that allows for future expansion?

New facilities should be located wherever possible on previously developed sites and avoid building on campus open spaces.

- Can the program be met without building on a new site?
- Can existing sites accommodate the new facility/program?

New developments should consider, complement and integrate existing infrastructure and uses.

- Does the development demonstrate appropriate relationships with the existing campus infrastructure and uses? How are the new functions and circulation routes compatible with those of adjacent buildings and open spaces?

New Building and developments should protect, enhance and animate open spaces.

- How does the building enhance the spatial structure of the site?
- Does the orientation of exterior spaces associated with new buildings maximize solar exposure and protection from winds where possible?
- Does the building façade animate and connect to outdoor spaces?
- How do buildings enhance the functional relationship between buildings and open space?

New and redevelopment projects should be aligned with the design goals as outlined in Sections 4 and 5 of this document.

- How does the proposed development achieve the specific objectives and goals outlined in the Plan?
- How does the proposed development reinforce the character of the precinct it forms part of?

Construction + Site Disturbance

All development and redevelopment projects should have a strategy for managing and minimizing impacts to the existing landscape. An erosion and sediment control plan should be in place prior to commencement of construction activities.

- Does the project/development have a strategy for minimizing impacts on existing vegetation and soil?
- What is the erosion and sediment control plan for this project?

Water Resources

An Integrated Water Resource Management (IWRM) approach should be undertaken to holistically plan and design for water systems within buildings and the landscape.

- What IWRM strategies are best suited for the development project?
- Have potential areas for stormwater retention and infiltration been identified and integrated in the design?

Stormwater management strategies and sustainable practices should be incorporated in all new developments and where opportunities exist to retrofit.

- How are the project's stormwater management strategies aligned with the Sustainable Landscape Strategies in this document, the 2012 - 2016 Sustainability Plan, and other University policies?
- What areas for infiltration and stormwater capture have been identified for this project?

Landscapes should be designed to minimize the need for maintenance and irrigation.

- How does the proposed design minimize the need for maintenance and irrigation while maintaining aesthetics and functions of the site?

Soils + Vegetation

A soil assessment plan and soil management plan should be undertaken prior to the development of any project and weighed against project goals for vegetation and stormwater management.

- How does the site's soil assessment inform potential vegetation and stormwater management strategies?

All capital projects should prioritize landscape restoration and enhancements to adjacent open spaces. Site disturbance should be reduced by protecting and restoring open spaces.

- Have significant open spaces, soils, and vegetation been identified? How does the development protect, restore and enhance these significant elements?

New and redevelopment projects should comply with the University policies regarding tree preservation and management. Every effort should be made to preserve and protect existing trees.

- Have all trees and vegetation within the disturbed area been documented and their value assessed?
- Are removed trees being replaced as per University policies regarding tree preservation and management?

Landscape projects should be designed with an ecological approach to vegetation, including native plants and communities.

- How does the selected vegetation enhance and restore ecological systems within the campus?

Green roofs should be considered for all new capital building projects and parkades, subject to maintenance and operational demands.

Materials + Resources

Materials used in new projects should suit the climate conditions found on the campus. Regional and natural materials should be favoured over materials imported from remote areas.

- Does the design specify local, durable materials and native vegetation?
- Are site furnishings consistent with the University's standards?

Operations + Maintenance

Maintenance should be considered in all stages of planning and designing a new project. Landscapes should be designed in accordance to the level of maintenance they will receive. Alignment with current University standards must form part of any consideration.

- Open space projects should undertake a feasibility study to determine the best fit between construction cost, operating cost and maintenance cost.
- Can the budget accommodate maintenance and operational costs?

Open space design should aim to limit maintenance cost. Areas of high maintenance should be limited to primary use areas such as quads, greens and courtyards.

- How does the proposed design minimize landscape maintenance needs?

All projects should include a maintenance guide that outlines activities, time lines, equipment and personnel necessary for the short term to achieve the ultimate desired outcome. Bioretention facilities should have a specific inspection and maintenance strategy.

- Is the proposed maintenance guide comprehensive and cost-effective?
- Are snow storage areas accommodated?

Health, Safety + Accessibility

New and redevelopment projects should be designed to provide universal accessibility, personal safety and security and legible wayfinding.

- How does the development/redevelopment project enhance safety, accessibility and wayfinding?

Exterior spaces should be designed utilizing Crime Prevention through Environmental Design (CPTED) strategies.

- What CPTED strategies have been applied to the proposed project?

New and redevelopment projects should incorporate lighting in all public spaces in accordance with the Illumination Engineering Society's Guideline on Security Lighting for People, Property, and Public Spaces.

- How does the proposed lighting enhance safety and legibility on campus?

Emergency access routes should be designed to facilitate access while creating high quality pedestrian environments where routes are within the pedestrian realm.

Campus Mobility

The campus should be universally accessible.

- Does the project provide measures to ensure convenience and accessibility for cyclists and pedestrians, including the mobility-challenged?

New developments and redevelopments projects should align their patterns of circulation with the North Campus Strategic Concept and Connections and Pathways concepts identified in Section 4.

- How does the proposed circulation align with the objectives of the Plan related to pedestrians, bicycles, and the mobility-challenged?

Pedestrian and cycling circulation routes should be easily understood, with a clear hierarchy and adequate wayfinding signage.

- How does the development contribute to campus legibility and wayfinding?
- How does the proposed design and signage reduce potential circulation conflicts?

New developments and redevelopments should include bicycle storage facilities. Class 1 storage facilities should be provided in all new parking structures or at key locations. Class 2 bicycle parking should be provided near all building entrances.

- How does the project accommodate bicycle parking?

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Appendix 2

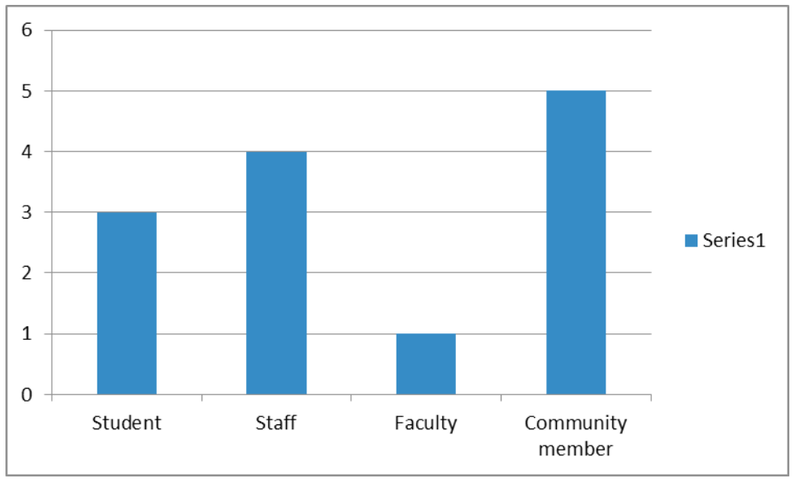
Stakeholder Engagement

HUB

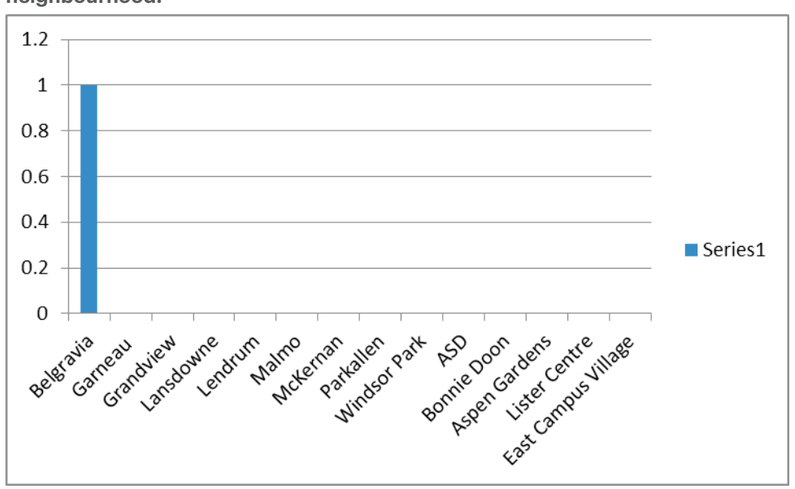
Evaluation Summary

THURSDAY, MARCH 27, 2014
POP-UP CONSULTATION 12 NOON – 1 PM
SYMPOSIUM – ENHANCING YOUR CAMPUS EXPERIENCE 7 – 8:30 P.M.

1. Are you one of the following? (please circle):



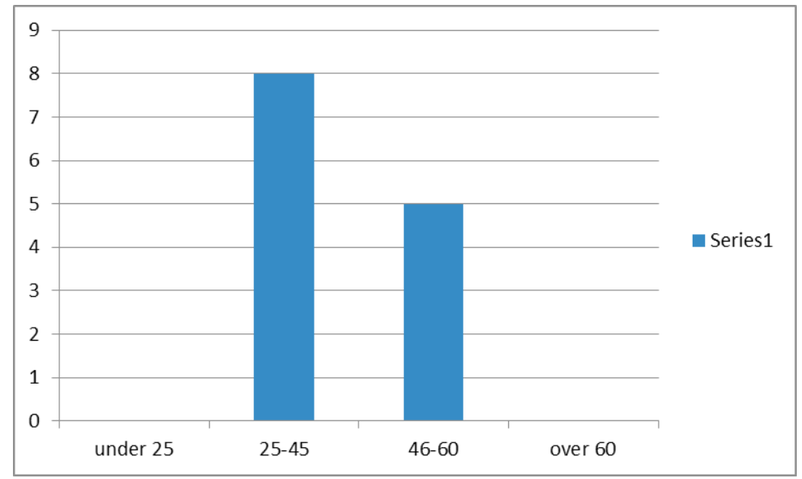
If you reside in one of the following neighbourhoods please circle that neighbourhood:



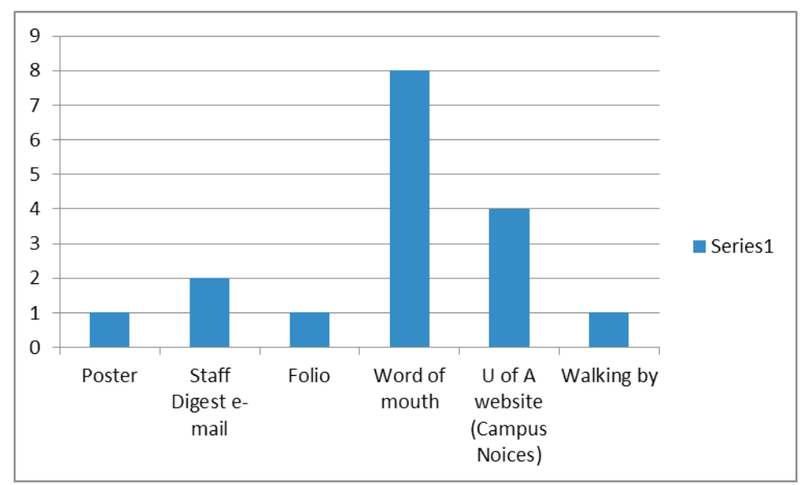
2. If you reside in a different neighbourhood please provide the name of that neighbourhood.

Inglewood, Oliver, HUB, Rossdale/Boyle Street, Ellerslie/Summerside, Lessard.

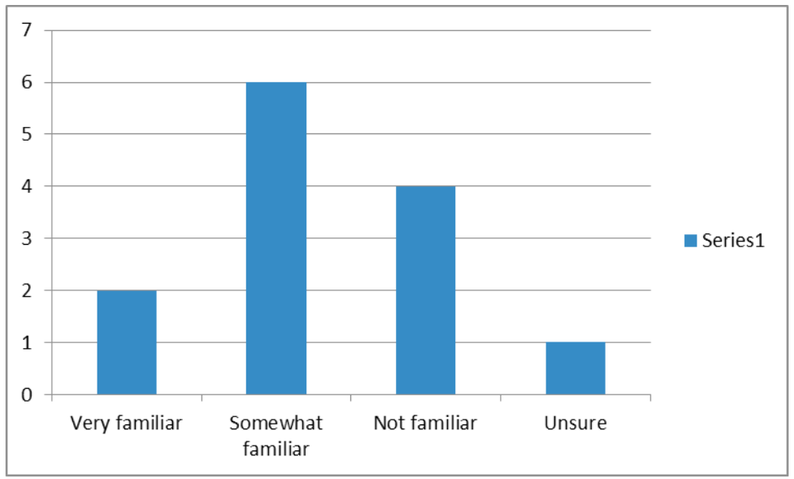
3. Please check the age category that you are in.



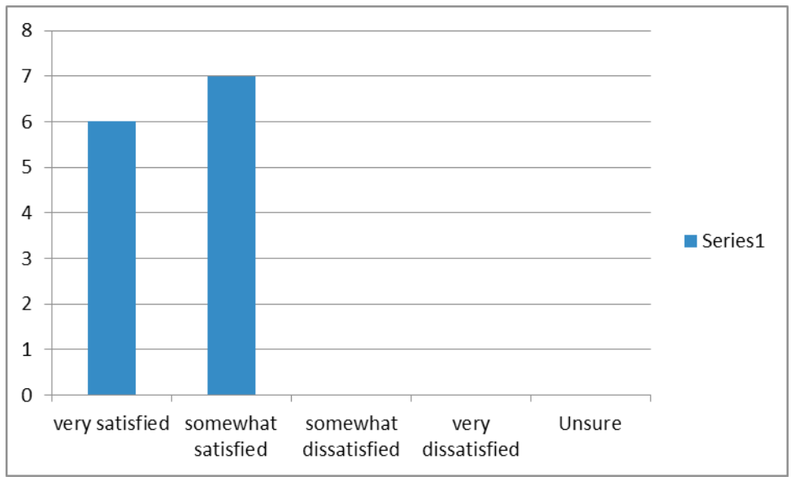
4. How did you hear about this consultation/symposium?



5. Are you familiar with the North Campus Open Space Master Plan?



6. Did the material that was presented explain the purpose of the North Campus Open Space Master Plan?



7. Please list your favorite spaces on campus and why:

- Water feature/picnic tables. Humanities park like setting, very relaxing. Enjoy short walk between Triffo Hall and CAB - very intimate and quiet. Business Quad/water feature by Old Arts - very relaxing, encouraging to wildlife, love the birds! Green space between Assiniboia Hall and Med Eng - great gathering place and needs more picnic tables.
- Any place with trees and green space. East Campus Village - great look, pedestrian/cyclist orientated. Tree lined boulevard between Dent/Phar and St. Joe's. Alumni Walk node seating, gathering place.
- Quad: simple wide open framed by heritage buildings (not CAB). Arts courtyard: one beautiful old bldg., Old Arts Building, nice fish pond. Wide walkway past Dent/Pharm: old buildings, nice trees, linear...almost European but not quite.
- Water features/very tranquil. Seating area. Grassy knolls with trees!
- Quad - space that represents the U of A overall as an important space that enhances activities while on campus that is unique to the urban life
- The "green spaces because they soften the landscape and the soul. All 1800-1930 buildings because beautiful architecture is timeless. Under large trees because the presence of old trees offer refuge from business. The RAT because it is a great social hub with a view that reminds students that there is more the Edmonton outside the island of campus. In terms of outdoor inter activities in the quad or open areas, I suggest a small hill to encourage winter tobogganing which will courage outdoor play regardless of weather conditions.
- N/A - not familiar with campus.
- HUB. Health science precinct.
- Arts quad - works well with Con Hall and Tory buildings (could however use a prominent entrance to HUB from arts quad...). Walkway between Cameron and old Power Plant had good atmosphere.
- North of Earth Science in the fall. Quad - always busy and connected...& food trucks. SUB - friendly, warm, especially during market day. East Campus - Garneau connection.
- Triffo Hall - heritage building, LEED Gold certifies (?) sunny welcoming brick. Arts bldg. - heritage, beautiful inside, peaceful, quiet. Arts Quad - cozy, hidden gem, raw, a bit less contoured and coiffed. Main Quad - tons of activity, possibilities, potential, community feeling.

8. **Please provide any other suggestions/concerns/questions about the North Campus Open Space Master Plan.**

- Covered walkways (Old Arts to Rutherford between CAB and Triffo). Are there opportunities for more solar power to be used? For lighting etc. Trolley car around campus - challenge engineering students to come up with some sort of trolley system! (kind of joking about that - kind of not). I think U of a has a beautiful campus maintaining and celebrating the older buildings is important - character - while also encouraging the new buildings but green space is important! Please continue the strong green space presence. Than you.
- Loved it, especially establishing clear lines of sight and focusing on pedestrian/cyclist traffic. Open air market could be great!
- See attachment for my detailed review based on what I could download. The focus of the plan should first be Connectivity. Students spend more items walking between buildings than sitting around outside. They can only do that in summer and about 1/5 months in fall. Go to Europe or a nice campus and find fact connected routes for walking i.e. done with pacers and trees and will articulated architecture. Landscape architects like to build lots of plazas: they make money that way but in fact they are not well used in our climate. They also need active edges i.e. shops or cafes around them. For example one proposal is a plaza between fine arts and law. I can tell you there is already a space there that is hardly used. If you want to sue the space, turn it into an Atrium and fill the south end with plants and a water feature. Both sides open to law and fine arts.
- What is the Quad? Please define. What happens to the “programming” of this if you re-imagine residences on the Quad?
- The prairie landscape plaza south of library was interesting - but why there? Was there are particular reason that this design approach is applied here? There was no mention of how the master plan concept design addressed the harsh winter and chilly springs seems to me there are many “wind tunnels” across the campus - is there a way - and it may be limited - to make the open spaces more comfortable?
- Greater explanation required as to relationship between OSMP and other development strategic plans. How the OSMP will be implemented, timeframes. Should the OSMP identify or explore act ivies or events which would/may increase use and/or appreciation of the open space areas?
- Too much hardscape. More naturalized areas - mowing grass is not environmentally friendly. More informal tree plantings.
- Critical to address entrances/exits/indoor-outdoor transitions. Should enhance e.g. north, south, central entrances to HUB mall (north and south ends and redevelope entrance on Arts Quad). LRT entrances (esp. the west ones). North entrance to Education building. Mostly to make them more functional: larger doors, larger entrances, and larger entrance plazas. Improve boarders/connection with surrounding areas. Especially SW corner (Varsity Field), 112 st streetscape, connection with river (esp. around HUB north. Rutherford House/Tory buildings).
- East - west bike lane on 87 ave (to compliment E-W route along north edge - Sask Drive). Patio chairs on CCIS South patio. What about another market/food truck space where you note behind Telus/Timms/FAB/Humanities? Safe pedestrian crossings north-south across 87 avenue are a great idea. Winter campus - indoor/outdoor views and connections should be emphasized.
- There was talk of the CCIS south terrace patio being a great gathering place, why not get some café tables and chairs (like Churchill Square) and just put them out there? All over Quad? I saw a reference to “consulting internal stakeholders” but now mention of where they are - students? staff? Faculty? Should stakeholders be represented proportionally? Students use open space far more than staff or faculty just by their transient nature. I spoke with a facilitator who shares my concern about the transit loop being a very dangerous and unwelcoming space for pedestrians -what about burying the bus loop or elevating some of the sidewalks? I saw (in winter) people using picnic tables behind snow drifts to hang out in Quad.
- I would help to show existing conditions on one slid beside proposed. Have the movements of students been considered with regards to classes? i.e. Engineering (Nat Resources) to Rutherford. What programming will occur in the major spaces and who will handle it? Will guidelines for future bldg. development be considered in this study - with regard to maintaining or creating “new” open space? Will come existing open space remains “sacrosanct” or off limits for development? How will the open space mater plan make the open space identifiable? It is very homogenous and lacking structure of the landscape now. The concept of “a giant living laboratory”.

9. If you attended the symposium, what did you learn from the information presented?

- That we are weak and complacent.
- Regarding the presentation - great graphics i.e. very clear however it would have been really good if the left green showed an aerial photo or plan of the existing campus including enlargements of each area as they were discussed. It would have made the design issues much clearer.
- History/background of campus development. Issues associated with current campus and how open space management can address these issues.
- Good overview of campus future.
- Love the idea of open air market between SUB/AgFor/Pembina. Love the plazas e.g. By Triffo/NPP. Love the prairie quad south of Rutherford. History of Quad is fascinating and appreciate the attention being paid to it - also like more attention towards the desire lines. Happy to hear about tree replacement policy.
- The University has selected some great people to work on this. Their consideration of people over vehicles and people over systems is fantastic. I really like to see a holistic process which engages the people who use the space day to day and year to year.
- Considerable work has been done with more to come.

Additional comments from post it notes from Pop-up Consultation:

Board A - Campus Precincts

1. How did we choose “precinct” as a descriptor
2. More open space

Board B - Strategic Concept Design

1. Links to the river?
2. Photo friendly spot with Ualberta sign?
3. Walk of 6 ponds, signage, Q codes etc..
4. Outdoor heaters to max outside.
5. Need strong smooth access for bike routes.
6. Needs improved signage.
7. Needs lot so bike parking.
8. Improve Varsity.
9. Playground for adults/geriatrics.
10. Like the idea of anchoring campus at Dent Pharm.
11. Better signage needed across campus - including for special events.

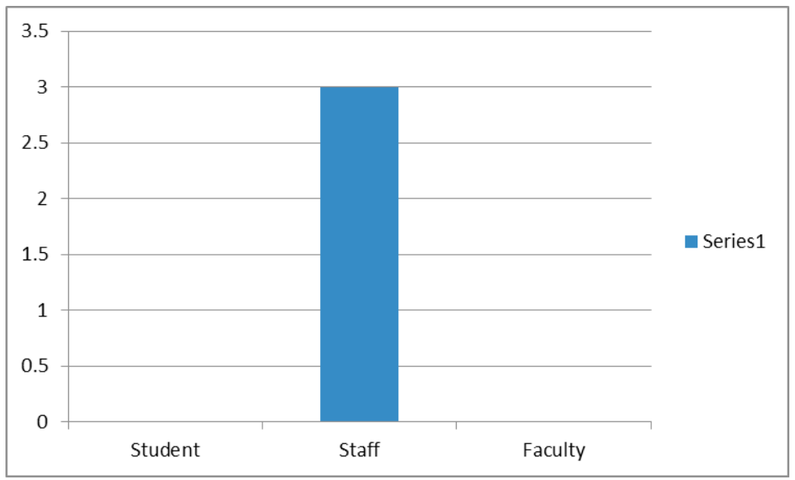
Board C - Overall Campus Concept

1. Make campus more friendly to walkers i.e.. Sidewalks.
2. Buildings are walls, not to be open.
3. More connection between buildings covered or pedway.
4. More weather protection for pedestrian - atriums, coverings.
5. Please rename one of the ED buildings.
6. Work with City to deal with this traffic issue.
7. Expand the water fountain to allow for a winter rink and embrace Canadian and allow for use in the winter.
8. needed walkway
9. Why have a smaller water area by Pembina Hall?
Seems like a wasted area.
10. Love atrium idea.
11. Yes
12. Roof top gardens?
13. Winter City = need pedways or protected walkways
14. Walk of 6 ponds.

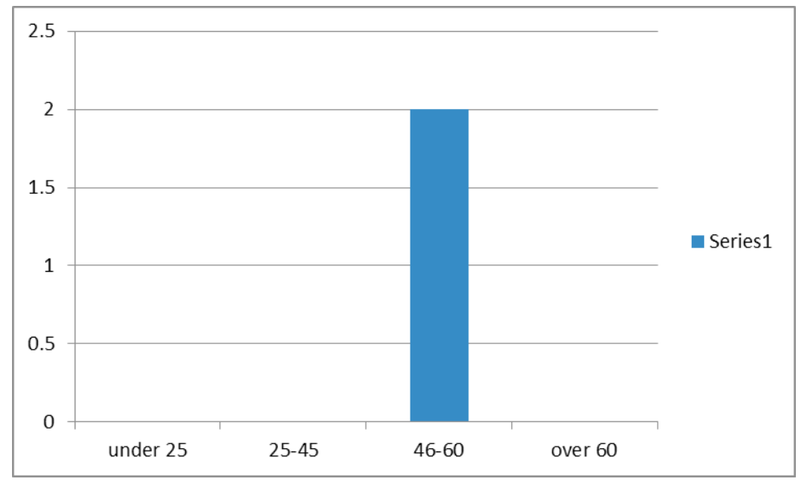
Evaluation Summary

THURSDAY, NOVEMBER 28, 2013
TELUS CENTRE ATRIUM
111 STREET AND 87 AVENUE

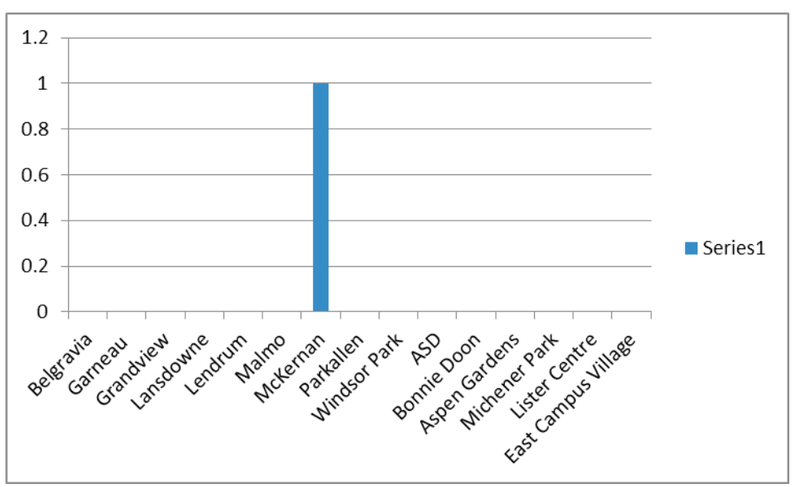
1. Are you one of the following? (please circle):



3. Please check the age category that you are in.



If you reside in one of the following neighbourhoods please circle that neighbourhood:



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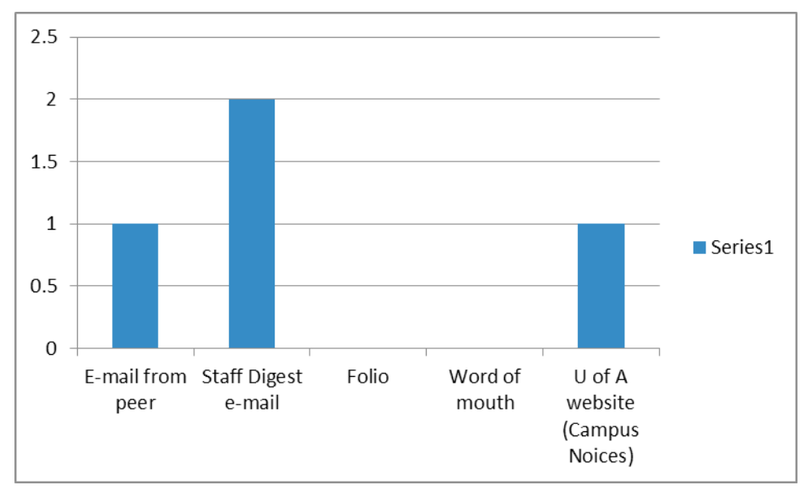
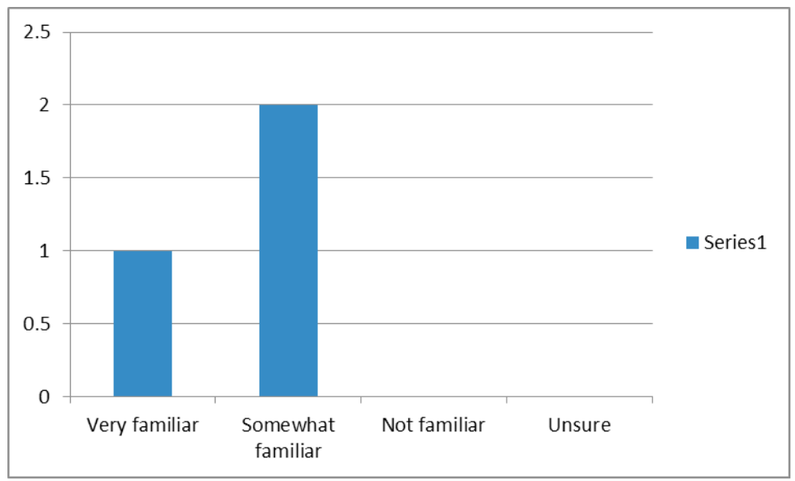


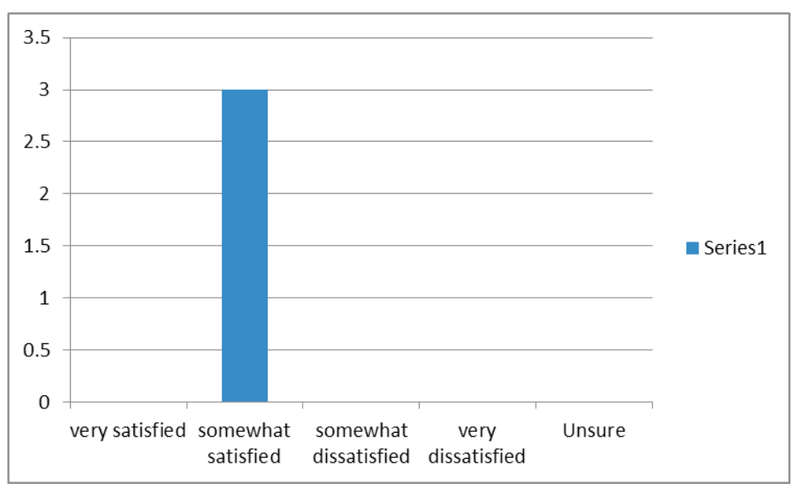
2. If you reside in a different neighbourhood please provide the name of that neighbourhood.

Holyrood, Callingwood

5. Are you familiar with the North Campus Open Space Master Plan?



6. Did the material that was presented explain the North Campus Open Space Master Plan?



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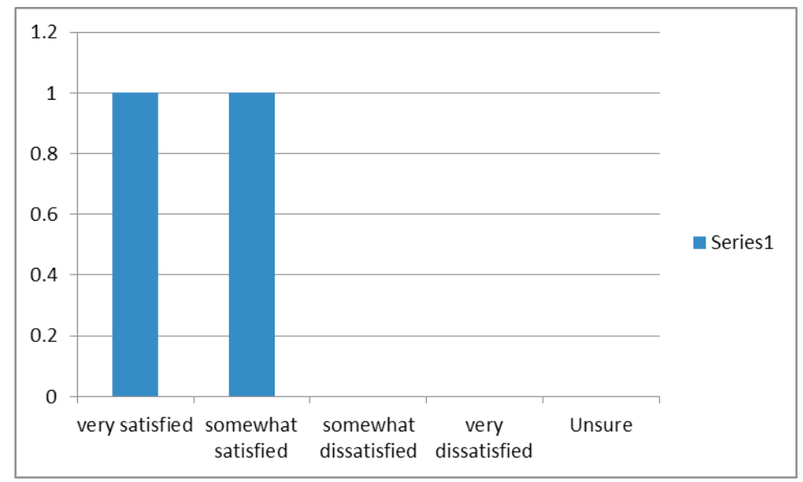

8. Do you have any additional comments to the following planning elements listed on:

- My only comment for the planning would be to have directional signs around campus. U of A Campus is getting larger and more cluttered with new buildings and even for those that have been on campus awhile it is sometimes difficult to find your way around.

9. Do you have any additional comments on regional accessibility and how you access the campus – Board #13?

- Would like to see some protection and enhancement of biodiversity, canopy cover and natural species.

10. Please list your favorite spaces on campus and why:

- Pond behind the old Physics bldg. The green space by Admin Bldg. Sitting outside of SUB facing Phys Ed & Uni Hall. Walking along 87 Avenue.

11. Please provide any other suggestions/concerns/questions about the North Campus Open Space Master Plan.

- Need for a curatorial facility - viable percent for Art program.

Appendix 3

Acknowledgements

HUB

Acknowledgements

The preparation of the Open Space Plan involved the enthusiastic and knowledgeable participation of several individuals.

The Open Space Plan was prepared by **O2 Planning + Design Inc.** under the direction of the Campus Open Space Master Plan Committee. Members of the Committee included:

Bart Becker	Former Associate Vice President, Facilities and Operations (Former Chair)
Ben Louie	University Architect (Interim Chair)
Peter Alexander	Associate Director, Campus Planning and Architecture
Janine Andrews	Executive Director, Museums and Collections
Megha Bajaj	GSA Executive/VP Student Services
Ray Dumouchel	Associate Director, Buildings and Grounds Services
Professor Roger Epp	Dean (Current or Former)
Heather Green	NASA
Phil Haswell	GFC – FDC Member
Jim Hole	Alumni Association
William Lau	SU Executive/VP Student Life
Josh Le	SU Executive/Former VP Operations and Finance
Professor Robert Lederer	AASUA
Ken Regan	Senate
Andrea Smith	University Relations

The project team also received valuable input from a key internal stakeholder team, which participated in workshop sessions. Stakeholder team members included:

Lorna Baker-Perri	Associate Director, Accommodation Planning and Programming, Office of the University Architect, Facilities and Operations
Emily Ball	Community Relations Officer, University Relations
Lorrina Belland	Planning Officer, Accommodation Planning and Programming, Office of the University Architect, Facilities and Operations
Jessica Cobb	Volunteer, Manager and Partner, Lead, Office of the Registrar
Agnelo da Silva	Executive Director, Utilities, Facilities and Operations
Keith Hollands	Associate Director, Design & Technical Services, Facilities and Operations
Kelly Hopkin	Senior Campus Planner (Architecture), Office of the University Architect, Facilities and Operations
Trina Innes	University Sustainability Officer and Director, Office of Sustainability
Anastasia Lim	Executive Director, University Relations
Tom McLean	Manager, Landscape Services, Building and Grounds, Facilities and Operations
Kiann McNeill	Director, Marketing and Communications
Sean Price	Associate Vice-President, Office of Advancement
Brock Richardson	Student Success Specialist, Ancillary Services, Residence Services Administration
Ellen Schoeck	University Historian
Terrence Sperling	Associate Director, Residence Operations, Ancillary Services, Residence Services Administration
Todd Werre	Director, Project Management Office, Facilities and Operations
Sarah Wolgemuth	Assistant Dean of Students, Residence Life

The O2 Planning + Design Inc. project team was headed by **Douglas Olson,** Principal in Charge and Senior Landscape Architect, supported by:

David Johnston	Project Manager, Senior Planner
Matt Williams	Senior Landscape Architect
Ana Galdon	Landscape Architect
Jenna Matthews	Landscape Planning Intern
Meaghan Murray	Urban Designer
Max Olson	Graphic Designer
Caitlin Smith	Landscape Planner
Connor Stevens	Environmental Designer

The project team also wishes to thank members of the University community and the general public who attended and provided input at public open house events in November 2013 and March 2014, as well as an Open Space Symposium held on March 27, 2014.

UNIVERSITY OF ALBERTA

Office of the University Architect

Facilities and Operations, Planning and Project Delivery