A Executive Summary

A.01 The University of Manitoba is issuing this open international design competition to develop a vision for the future of the Fort Garry Campus and to engage a team (following the competition’s completion) to produce:

- A new Campus Plan that identifies a physical planning and design framework to guide future growth and development of the Fort Garry Campus across its 279-hectare (690-acre) site. The Fort Garry Campus Plan will form a critical framework through which the University can achieve its objectives in the short, medium, and long terms. The experiential qualities of the campus, the density and massing of buildings, the objectives for open spaces and plazas, the streetscape, and overarching sustainability objectives will all be addressed by the Campus Plan. The University is currently drafting a Space Master Plan for the Fort Garry Campus that will inform the new Campus Plan.

- A 49-hectare (120-acre) Precinct Plan for the former Southwood Golf Course at the northern portion of the Fort Garry Campus. The Southwood Precinct Plan will include a detailed public realm plan, land use program and phasing plan to accommodate up to 4,200 multi-dwelling units and 21,070 square metres (226,800 square feet) of retail and hospitality space, as identified in the November 2012 Market Study Supply and Demand Analysis.

- A Phase One site plan for approximately 8 hectares (20 acres) of the Southwood Precinct. This plan will enable the creation of a dense, vibrant urban village centered on public transit nodes/stations in the Southwood Precinct. It will also include the conceptualization and siting of the first Demonstration Project, consisting of mixed-use, multi-generational developments and public spaces that accommodate students, the wider community, and supporting amenities. This project is anticipated to be timely, with groundbreaking occurring within three years. This is consistent with the growth rate potential indicated in the Market Study Supply and Demand Analysis.

A.02 In 2011, the University of Manitoba took the bold initiative of acquiring the former Southwood Golf Course, an eighteen-hole golf course adjacent to the Fort Garry Campus. The University recognizes that the acquisition of this picturesque landscape opens up an unprecedented opportunity to transform the Fort Garry Campus into an exciting live, work, learn, play environment. This transformation will help improve the campus experience for its primary users – students – but also for the community at large.

C Context

Description of the task’s context as determined by the promoter, the building site, its surroundings, technical requirements and legal regulations.
Seven Precincts of the Fort Garry Campus
C

Context

C.1 | Location and Size of Competition Site

C.01 The project site is located at the University of Manitoba’s Fort Garry Campus in Winnipeg. The Fort Garry Campus is situated approximately thirteen kilometres south from the intersection of Portage Avenue and Main Street in the Downtown and nineteen kilometres from the Winnipeg International Airport.

C.02 Measuring a total of 279 hectares (690 acres), the project site is bound by the major roadway of Pembina Highway to the west and the Red River to the east. Residential neighbourhoods to the north and south of the campus delineate the remainder of the campus. Chancellor Matheson Road running in the general east-west direction and University Crescent oriented north-south, are the two main entry ways into the campus.

C.03 The Fort Garry Campus is divided into seven precincts, which are shown on the site map on the opposite page:

- **Part A (“Southwood”)**: the main project site for a new mixed-use residential community. It is currently comprised of unique ecological niches, many mature trees and a spatial composition based on its prior design and use as a golf course. Part A measures 49 hectares (120 acres).

- **Part B (“Core Campus”)**: this is the primary academic precinct of the campus. It is the home to the student residence buildings and a wide range of campus services and amenities, as well as Physical Plant’s Central Energy Plant. It is the heart of the campus where day-to-day interaction and learning takes place. Important exterior environments such as the Duckworth Quadrangle are located within this area. Provincial and Federal Land Leases are located within this area as well. Part B measures 78 hectares (193 acres).

- **Part C (“Smartpark”)**: a Research and Technology Park comprising the land south of Chancellor Matheson Road on the western side of the campus. Property development and management is operated by Smartpark Department, an ancillary service of the University of Manitoba, having its own Advisory Committee reporting to University Administration and the Board of Governors. It has the mandate to develop land and lease space to research and technology companies and organizations involved in broad research areas that coincide with areas of research expertise at the University. Part C measures 46 hectares (113 acres).

- **Part D (“Sport and Active Living”)**: contains the University’s athletic facilities. It houses the Frank Kennedy Centre, Investors Group Athletic Centre; the Max Bell Centre; University Stadium, Investors Group Field (a 33,500-seat sports stadium whose primary tenant will be the Winnipeg Blue Bombers, the city’s professional Canadian football team); the Winnipeg Indoor Soccer Complex; and two outdoor sports fields. A new 9,290 square-metre (100,000 square-foot) active living centre is being designed with a tentative opening date set for 2014. The University’s current snow removal and storage site is also located here, north of Chancellor Matheson Road. Part D measures 27 hectares (66 acres).

- **Part E (“Transition”)**: located at the southern edge of the campus between the Smartpark and Core Campus precincts. The Federal Government’s Freshwater Institute building is located in this area on land leased from the University. The University’s Alternative Village is also located here. Part E measures 16 hectares (40 acres).
Part F ("Point Lands"): comprises the agricultural fields on the eastern portion of the campus near the oxbow of the Red River. It is currently used by the Faculty of Agricultural and Food Sciences for agronomy, plant breeding, horticulture, physiology, and plant pathology research. The only vehicle access is located in the southwest corner, at the corner of Freedman Crescent and Saunderson Street. The area is also subject to seasonal on-site flooding should the Red River crest the site's perimeter levee. Part F measures 48 hectares (119 acres).

Part G ("Community Gardens"): this land contains the University of Manitoba Students Union (UMSU) student and community gardens. Part G measures 8 hectares (20 acres) (although the gardens do not take up the entirety of this land).

The University of Manitoba maintains ownership of all land within the competition site and has no intention of selling any of this land.

C.II | Winnipeg and Urban Setting

Provincial Context

C.05 Winnipeg is the capital city of the province of Manitoba, Canada, located in the geographic centre of North America approximately 103 kilometres from Manitoba’s southern border with the United States. Known as one of Canada’s ‘prairie provinces’ (the country has ten provinces and three territories overall), Manitoba experiences a continental climate and contains a wide range of geographical regions, from the boreal forest and tundra of the northernmost subarctic regions, to the rocky Canadian Shield and the prairie parklands, grasslands, and agricultural areas of the southern parts of the province. Freshwater lakes and rivers cover one-sixth of its total area, with Lake Winnipeg and Lake Manitoba being the largest.

C.06 Approximately 650,000 square kilometres in total area, Manitoba is home to 1,235,000 people. The majority live in the south of the province, with over 760,000 residing in the capital city of Winnipeg and its ten surrounding municipalities. Much of the province is rural, consisting of towns and small cities. The northern regions are more sparsely populated; some remote northern communities are only accessible by airplane in the summer and fall, and frozen ice roads in the winter.

C.07 Manitoba’s land mass is covered by five Treaty Territories. Between 1871 and 1921, the Crown entered into treaties with various First Nations that enabled the Canadian government to actively pursue agriculture, settlement, transportation links and resource development of the Canadian West and the North. Eleven treaties were signed. While it is clear that in the past, First Nations and the Crown had differing interpretations of what treaties meant, there has recently been renewed emphasis on strengthening, rebuilding and enhancing the Treaty relationship with mutual respect between First Nations and Manitobans, through the Treaty Relations Commission of Manitoba.

www.trcm.ca
www.trc.ca
www.aadnc-aandc.gc.ca/eng/1307460755710/1307460872523
www.cbc.ca/doczone/8thfire/
www.indigenousfoundations.arts.ubc.ca
Envisioning a Sustainable Campus Community at the University of Manitoba in Winnipeg, Canada

Main Street near Portage Avenue 1950, UofM Archives and Spec. Collect.

Main Street Winnipeg 1935, Canadian National Railways

Main Street Winnipeg 1928, CN Images of Canada Gallery

Union Station and East Yards 1918, The Forks

University of Manitoba Broadway 1960, UofM Archives and Special Collections
History

C.08 Winnipeg’s rich history began with the original peoples – First Nations (Anishinaabe, Cree, Dakota, and Oji-Cree) who resided on this traditional territory before the arrival of European settlers. The confluence of the Red and Assiniboine Rivers in the heart of what is now downtown Winnipeg was a key location for Indigenous trade and settlement and is considered one of the earliest trading posts in Manitoba, dating back 6,000 years. Before the arrival of Europeans, the flat prairie region in which Winnipeg would eventually develop was a vast sea of shoulder-high prairie grass with rich and fertile soils. Increased settlement changed the fabric of the landscape, and a ‘river lot system’ (based on the Seigneurial system of New France) was used to set up farms along the Red River. It consisted of long narrow lots stretching back perpendicular to the Red and Assiniboine Rivers. This was the settlement pattern of the area’s Métis population. Later, in the 1870s, the Dominion Land Survey began dividing the prairie landscape of southern Manitoba into one-square-mile sections for agricultural and settlement purposes. Traditional Indigenous ways of life, and the landscapes that fostered them, were disrupted in favour of the agricultural development that characterizes the region today.

C.09 Beginning with European contact in the early seventeenth century and stretching to the early nineteenth century, the French, English, and Indigenous fur trade was a key factor in the increased settlement of what is now Winnipeg. The establishment of the Scottish Red River Settlement in 1812 was also important in this respect. Winnipeg – derived from a Cree word roughly translated as ‘muddy water’ – was incorporated as a City in 1873. The Métis, led by Louis Riel, brought about the creation of the Province of Manitoba through the Manitoba Act, and had increased the attention of the Dominion Government toward populating Western Canada with more European settlement. This settlement, paired with the arrival of the Canadian Pacific Railway through the city in 1885, and the rise of the region’s grain trade, resulted in rapid population growth and urban development spanning from the late nineteenth century through to the start of the First World War.

C.10 The railway was instrumental in what would be Winnipeg’s boom period, with the city’s population tripling between 1901 and 1911. By 1912 Winnipeg was Canada’s third-largest city and was experiencing unprecedented growth and prosperity. During this time it was the undisputed metropolis of Western Canada, and the self-styled ‘Chicago of the North’: an urban centre of trade, finance, arts, culture, and architecture. Out of this growth also sprang a vanguard of social activism: as a result of a powerful suffrage movement led by Nellie McClung, Manitoba women became the first in Canada to win rights to vote and to hold provincial office. Later in 1919 the Winnipeg General Strike (the largest strike in Canadian history), saw approximately 30,000 workers across a variety of sectors walk out for six weeks. Also in 1919, the city opened its aqueduct carrying drinking water downhill from Shoal Lake, about 137 kilometres to the east. This is still the source of Winnipeg’s drinking water today.

C.11 The advent of World War I together with the opening of the Panama Canal and falling grain prices reduced the economic dominance of Winnipeg as an overland shipping centre. Although the population continued to grow in subsequent decades, the city’s boom years were decidedly over. Population growth began to dwindle in the 1960s, with increasing suburbanization and peripheral sprawl characterizing the city’s footprint. In 1972, the City of Winnipeg Act amalgamated the adjacent municipalities with the central Metro Winnipeg area, creating the current City of Winnipeg boundaries.

www.flickr.com/photos/manitobamaps/
www.flickr.com/photos/streetcar356/sets/72157623451546266/
Map of Downtown Winnipeg

- Old Market Square
- Exchange District
- Canadian Museum for Human Rights
- Manitoba Hydro office tower
- MTS Centre
- Millennium Library
- The Forks
- Osborne Village

Map of Downtown Winnipeg
C.12 As one of the coldest urban centres in the world, Winnipeg experiences four distinct seasons with an annual mean temperature of 2.6 degrees Celsius. The warmest month is July with an average high of 26.1 degrees Celsius, and the coldest is January with an average low of -19.6 degrees Celsius. This represents a temperature variation of over sixty degrees Celsius when winter wind chill is taken into consideration.

www.cbc.ca/doczone/episode/life-below-zero.html#

C.13 Winnipeg is located in the wide and extremely flat Red River Valley floodplain formed by glacial Lake Agassiz. The regional landform and watershed make Winnipeg subject to annual flooding (the 1950 and 1997 floods are two of the most notable in the recent history of the city and the province). In reaction to the 1950 flood, the forty-eight kilometre-long Red River Floodway was built to protect the city from future devastation. It has undergone significant expansion since the 1997 flood. The forty-five kilometre-long West Dike (southwest of Winnipeg) also provides flood protection for the city by preventing Red River floodwaters from flowing into the La Salle River and entering Winnipeg.

C.14 As of 2011, the population of the City of Winnipeg was 691,800, while the Winnipeg Census Metropolitan Area – which includes several surrounding municipalities – was 762,800. The city is projected to grow to by 180,000 by the year 2031.

C.15 Winnipeg’s Downtown forms the centre of its urban structure. Downtown contains the largest employment concentration within the city along with service, commercial, and retail components. Many of the city’s major arts, entertainment, and cultural institutions are located there, along with several historic districts. Notable areas include the Exchange District, a historic multi-use warehouse district with the vibrant Old Market Square at its centre; and The Forks, a large park, public space, and commercial area at the confluence of the Red and Assiniboine Rivers. In 2011 The Forks was named Canada’s top public space by the Canadian Institute of Planners. Downtown also contains multi-unit residential areas consisting of apartments and condominiums.

C.16 Older established areas surround Downtown. These are Winnipeg’s earliest neighbourhoods and first suburbs, developed between the late 1800s and 1950s. Generally of higher densities, they are characterized by grid road networks and often mixed-use streets, many of which are lined with mature trees. One of these neighbourhoods, Osborne Village, was named Canada’s Great Neighbourhood for 2011 by the Canadian Institute of Planners.

C.17 More recent neighbourhoods exist beyond the mature areas surrounding Downtown. These were developed after the 1950s, or are currently still under development. They are primarily residential areas with low to medium densities, with a mix of grid and curvilinear road networks based on a hierarchy of vehicular traffic flows. The Fort Garry Campus is located in one of these areas, bordered by the well-established suburban communities of Agassiz, Montcalm, Waverley Heights, Fairfield Park, Richmond West, Fort Richmond, Minnetonka, River Park South and Normand Park.

C.18 There are also largely undeveloped areas further towards the city’s edges designated as new communities identified for future suburban development. Beyond these and still within city limits are large tracts of land devoted to rural and agricultural uses.
Museum for Human Rights, Dustin Dilts
Throughout Winnipeg there are many large parks, green spaces, and urban forests. The total number of trees in the city is estimated at eight million, with about two hundred and eighty thousand boulevard trees. The city also has the largest remaining mature urban elm forest in North America, although Dutch Elm Disease now threatens this culturally important species. Included in the city’s numerous parks and green spaces is Assiniboine Park, which is around 162 hectares (400 acres) in size and includes a large urban forest, the Assiniboine Park Zoo, a nature playground, a conservatory, several formal gardens, and two restaurants. Assiniboine Forest is located just south of Assiniboine Park, providing over 283 hectares (700 acres) of forested space in the city. FortWhyte Alive is a 259-hectare (640-acre) nature centre on the southwestern edge of Winnipeg containing five small lakes, floating marsh boardwalks, seven kilometres of walking trails, and an abundance of wildlife.

Winnipeg is currently in a period of exciting growth and rejuvenation with several major projects recently completed or underway.

Downtown is undergoing increased redevelopment and revitalization. Waterfront Drive is an example of this; located in the historic Exchange District along the Red River it incorporates multi-use paths, green spaces, and mixed-use condominiums.

The Canadian Museum for Human Rights, the first national museum to be located outside of Ottawa, will be one of the country’s most unique pieces of architecture. The museum is located at The Forks.

The James Richardson International Airport opened its new terminal in 2011, and CentrePort is a new inland port being developed near the airport.

Other recent developments include the Manitoba Hydro office tower (an award-winning LEED Platinum building); the MTS Centre (a sports and entertainment arena); the award-winning addition to the downtown Millennium Library, along with the recently redesigned Millennium Library Park; and Investor’s Group Field (a 33,500-seat stadium located at the University of Manitoba’s Fort Garry Campus). Winnipeg’s Assiniboine Park and Zoo are also undergoing extensive renovations. The Southwest Transitway, the first leg of the city’s rapid transit system, was completed in 2012. The city has also been energized by the return of its much-loved National Hockey League team, the Winnipeg Jets.

Recent studies by Moody’s Investor Service and the Conference Board of Canada have viewed Winnipeg’s economy as one of the most diverse and stable of any city in Canada. Agriculture is still a crucial industry, and the city’s wide range of key economic sectors includes advanced manufacturing, agri-business, aerospace, cultural industries, energy and environment, financial services, information and communications technology, life sciences, tourism, as well as transportation and distribution. Its diverse manufacturing sector ranges from food and beverages to tractors and farm equipment, buses, specialty steel products, electrical components, aerospace components, chemicals, plastics, furniture, and more. The finance, insurance, and real estate sector is also prominent in Winnipeg, accounting for over seven percent of the city’s gross domestic product in 2010. The city is also home to the Royal Canadian Mint’s Winnipeg facility, which produces all Canadian circulation coins as well as those for over sixty governments around the world. Winnipeg’s GDP is projected at $27.1 billion worth of goods and services in 2012, with a projected unemployment rate of 5.6 percent and a population increase of 1.3 percent (the population has increased 4.8 percent from 2006 to 2011).

Along with a growing population, Winnipeg also has an aging population. The proportion of people aged sixty-five and older is projected to grow from 13.2 percent in 2006 to 17.6 percent in 2030. The average income is $33,457 (C$) (2006), and the majority of Winnipeggers (65.1 percent) are homeowners. Generally the highest income neighbourhoods are located in the southern portion of the city and neighbourhoods with the highest home ownership rates are generally located away from the city centre. The rental market remains tight with a vacancy rate of less than one percent.
(exacerbated by increased conversion of apartment buildings to condominiums), and there is a need for affordable housing. Most people in the city (seventy-seven percent) rely on automobile transportation, with 14.2 percent relying on public transit. Eight percent walk or cycle.

C.27 Winnipeg has long been a multicultural city, as English, French, Indigenous, and Métis populations were all instrumental in its early settlement. The city’s French heritage is still very present; the French Quarter of St. Boniface is the largest Francophone community in Western Canada. Immigrants to Canada have called Winnipeg home since the city’s early days, and recently immigration has been on the rise after a slow period in the 1990s. Between 2001 and 2006, most newcomers to the city have come from the Philippines, India, China, Ukraine, Ethiopia, and South Korea. Winnipeg is also home to the largest number of Aboriginal (First Nations, Métis, and Inuit) people of any Canadian city: 68,380, or ten percent of the city’s population. This population is growing at a much faster rate than the non-Aboriginal population, is much younger on average, and is an important cultural presence in the city. It is projected that Aboriginal peoples will make up nearly 19 percent of the population of the province by 2026.

C.28 This multiculturalism has helped foster a thriving arts and cultural scene. Cultural events and activities are an important part of Winnipeg life with festivals such as Folklorama, Festival du Voyageur, and Manito Ahbee comprising some of the larger events. Visual and performing arts are also a vital part of Winnipeg’s urban culture. The Winnipeg Art Gallery, established in 1912, was the first civic art gallery in Canada and showcases a wide variety of national and international art. Numerous smaller and independent galleries are strewn throughout the city, with a high concentration in the Downtown area, particularly in the Exchange District.

C.29 The Winnipeg Symphony Orchestra celebrated its sixty-fifth year in 2012-2013, and performs in the Centennial Concert Hall. The Royal Winnipeg Ballet is the longest continuously operating ballet company in North America and enjoys a prestigious international reputation. Other performing arts organizations such as the Manitoba Theatre Centre, the Prairie Theatre Exchange, and the Winnipeg Fringe Festival (second largest of its kind in North America) are also important parts of Winnipeg’s cultural landscape. Additionally, the Winnipeg Folk Festival and Jazz Winnipeg Festival are large international events that compliment a thriving local music scene.

C.30 Since Winnipeg is a winter city, social activity does not disappear when the temperature drops. Throughout the winter months, ice-skating, hockey, tobogganing, and cross-country skiing are all popular pastimes. Frozen skating trails along the city’s rivers are well used and maintained, especially Downtown near The Forks. Winnipeg holds the world record for the longest naturally frozen skating trail in the world. Since 2010 an international arts + architecture competition has been held for the design of warming huts along the frozen river trail.
C.III | University of Manitoba

About the University

C.31 The University of Manitoba is Western Canada’s first university and is the region’s largest and only research-intensive university, offering over ninety degrees, diplomas, and certificates – more than sixty at the undergraduate level, including professional disciplines such as medicine, law, and engineering. The University of Manitoba’s Fort Garry Campus comprises over 26,000 students, 5,900 faculty and staff, and 180,000 alumni. Nearly eight percent of current students are international, representing close to one hundred countries.

C.32 Home to a thriving community of Indigenous researchers, staff, and over 1,800 self-declared Aboriginal (First Nations, Métis, and Inuit) students, the University’s vision is for Manitoba to become a centre of excellence for Indigenous education. Demonstrating its commitment to Indigenous achievement, the University of Manitoba offers many programs and services to support Indigenous students.

C.33 The University stimulates over $1.8 billion in economic activity in the province and is a leader in Manitoba’s knowledge economy, with ground-breaking research in areas such as nanotechnology, functional foods and nutraceuticals, HIV/AIDS, and climate change. The University is a coeducational, nondenominational, government-supported institution. It is also a member of the Association of Commonwealth Universities and of the Association of Universities and Colleges of Canada.

As Manitoba’s largest university located in the province’s largest city, the University of Manitoba draws a wide range of students from Manitoba’s rural and remote areas in addition to students from around the world.

Campus History

C.34 The University of Manitoba was established in 1877 as a “Provincial University” to confer degrees from three denominational colleges: St. Boniface College (Roman Catholic), St. John’s College (Anglican), and the Manitoba College (Presbyterian). In 1892 the University Charter was changed to allow the University to teach. By 1890 more space was needed, so rooms were rented in the McIntyre Block, a large building in downtown Winnipeg. A search for a new permanent site was initiated in 1893, although nothing was decided on at that time. In 1898, fire destroyed all records and equipment housed within the University’s rented space, resulting in a new search for a permanent home. In that same year the Dominion government transferred 2.7 hectares (6.6 acres) of land to the provincial government for educational purposes. In 1901, the University’s first building was completed on the newly acquired land along Broadway Avenue (present-day Memorial Provincial Park).

C.35 In 1903, the Manitoba Agricultural College was established as a “separate and distinct” institution from the University of Manitoba under direction of a Provincially appointed Royal Commission. Three years later several buildings were constructed on a 47-hectare (117-acre) property in the Tuxedo neighbourhood (this site would later become the Fort Osborne Barracks and today is home to the Asper Jewish Community Campus). The University and the Agricultural College amalgamated in 1907, and a new Medical College building was also constructed on Bannatyne Avenue near the General Hospital (the forerunner of the present-day Bannatyne Campus).
Envisioning a Sustainable Campus Community at the University of Manitoba in Winnipeg, Canada

Historical Growth of the Campus
C.36 In 1910, an offer put forward by the Tuxedo Park Company for a 61-hectare (150-acre) university site near the Agricultural College was accepted. However, the Agricultural College concluded that it needed more land, and relocated to the St. Vital area where the provincial government had just purchased 231 hectares (570 acres). Construction began in St. Vital at the site of the current Fort Garry Campus – land was cleared in 1911 and the Agriculture College’s first buildings were completed by 1912.

C.37 With the University unwilling to permanently locate at the original Broadway site, and the provincial government unwilling to provide money for new University buildings on the Tuxedo site, the Province offered 55 hectares (137 acres) of land between the new Agricultural College and the Red River (the present-day Point Lands). This offer was accepted in 1913. In 1917, the University changed its governance model. Formerly, the affiliated Colleges appointed a governing council, but a Board of Governors responsible to the provincial government replaced this body. In 1919, this Board of Governors decided on Tuxedo as the permanent site for the University. The Provincial Premier agreed to this in 1921, offering new grants for the construction of University buildings. As a result, the present-day Canadian Mennonite University building was constructed on the Tuxedo site.

C.38 However, a newly elected provincial government in 1922 appointed a Royal Commission that recommended the University join the Agricultural College at its location on the present-day Fort Garry site. The eventual decision to move to Fort Garry did not sit favourably with the Tuxedo developers who sued the University for failing to honour their initial agreement.

C.39 The debate over where to locate the university continued and as lawyers argued, the students had no choice but to remain in makeshift buildings. Their dissatisfaction with “having to work in ‘cowsheds’…reached a comic note in 1929 when they took a cow up to the second floor of the Old Law Courts Building and tied it to the door of the University Library” (Source: From Rural Parkland to Urban Centre: One Hundred Years of Growth at the University of Manitoba, 1877-1977, p. 8).

C.40 Also in 1922, the Avenue of Elms along Chancellor Matheson Road was planted as a living memorial to commemorate members of the Agricultural College who lost their lives for their country in World War I. The memorial was eventually extended to include students and staff who lost their lives in World War II and the Korean War.

C.41 In 1924, by act of the Manitoba Legislature, the administration of the Manitoba Agricultural College was transferred to the Board of Governors at the University, and the College became the Faculty of Agriculture and Economics.

C.42 The 1930s were an important decade for new building construction at the Fort Garry Campus, as the Arts (Tier) and Science (Buller) buildings were constructed as unemployment relief projects during the Depression years. They were the first departure from the original buildings, which were constructed in the Georgian aesthetic of Neoclassical massing red brick materials, and limestone details.

C.43 With the outbreak of World War II, Taché Hall (the University’s main residence) was converted into a navigation school. The Canadian Army constructed a series of temporary huts in the southern corner of the campus along with a drill hall and indoor rifle range. In 1945, the use of Taché Hall was restored to the University, and the temporary buildings were converted into classrooms and labs to address the influx of war veterans returning as students. Temporary housing was constructed for returning veterans, although it was destroyed in the flood of 1950.

C.44 In the late 1940s, construction intensified around the quadrangle adjacent to the Administration building. The Engineering Building was expanded, and its early modernist architectural style broke with the architectural tradition of the campus. New barns were constructed, and the old ones were renovated to serve Plant Science, Soil Science and the Provincial Veterinary Laboratory.
Aerial View of the Campus Area in 1946, UofM Archives and Special Collections

Aerial View of the Campus Area in 1959, UofM Archives and Special Collections
The 1950s was a period of renewed growth, aided by a growing economy and the relocation of the major college divisions to the Fort Garry Campus. To accommodate the relocation of undergraduate students from the downtown location, numerous new services and buildings were developed, notably the Elizabeth Dafoe Library, the Agricultural Research building, and further expansion of the Engineering building. The new development of this period also began to expand out from the traditional central core of the campus. Increased building construction in the 1960s generally conformed to the existing pedestrian orientation of the campus. Also during this time, increasing enrollment necessitated the addition of academic buildings to all the faculties. The Pan-American Games of 1967 also spurred new development, particularly the construction of University Stadium, an athletic field, and new athletic facilities. Campus planning during this era called for a compact clustering of central campus buildings, with vehicular traffic restricted to the periphery.

In the 1970s, the compact nature of the campus was transformed to accommodate student and faculty service demands. The result was a more sprawling and spread out campus. Funding diminished in the early 1980s, resulting in a period of reduced construction, although the Max Bell Centre was built in 1981. Economic constraints continued into the mid-1990s, punctuated by the development of the Investors Group Athletic Centre in 1998, built to accommodate the Pan-American Games of 1999.

Within approximately the last decade the University has seen a new period of growth and change with several new projects underway: a new sports stadium – Investors Group Field – is currently under construction and will hold over 33,500 people. ARTLab is a new building housing the University’s School of Art, and is adjacent to Taché Hall, which is being renovated and expanded to provide a new and centralized location for the Faculty of Music (including a large new auditorium). With the re-opening of the Campus Planning Office in 2011, there is also a renewed focus on the spatial quality and planning of the campus.

In January of 2008 a purchase agreement between the Southwood Golf and Country Club and the University of Manitoba was in place that would see the land transferred to University ownership. A 1970s trust fund, established for land acquisitions, gave the University the financial means to make the acquisition. The University of Manitoba took possession of the land in 2011.

The Southwood area was first developed as a riding club near the end of the nineteenth century. In 1895, the Winnipeg Riding Club, later known as the Winnipeg Hunt Club (1908) was formed at a time when riding was becoming more of a recreational pursuit than a regular occupation. A loss of members, along with a shortage of game to hunt and an increase in automobile usage, led to the slow decline and transformation of the Winnipeg Hunt Club.

A seven-hole golf course was most likely completed on the site in 1918, with an expansion to nine holes expected by 1923. Soon after, the Winnipeg Hunt Club changed its name to the Hunt Golf Club. The Agricultural College's streetcar line ran through the golf course, making it accessible to other areas of the city.

In 1919, additional land was acquired from the Agricultural College, and the Norwood Golf Club (est. 1894) joined the Winnipeg Hunt Golf Club to form the Southwood Golf Club.
Envisioning a Sustainable Campus Community at the University of Manitoba in Winnipeg, Canada

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Tribune Golf Southwood, UofM Archives and Special Collections

Hunting party, Archives of Manitoba

Score Card, UofM Archives and Special Collections

Snowshoe party, UofM Archives and Special Collections

Manitoba Agricultural College Playground Ball, UofM Archives and Sp. Coll.

1963 Gates partially completed, UofM Archives and Special Collections

Public Field Day 1914, UofM Archives and Special Collections

Administration Building 1978, Archives of Manitoba
C.52 Notably, Willie Park Jr. (1864-1925) of Musselburgh Scotland was engaged in the design of the original course. He was twice the winner of the British Open, winning in 1887 and again in 1889.

C.53 In 1925, Southwood was redesigned by famed Canadian Landscape Architect Stanley Thompson (1893-1953). It was his first eighteen-hole design in Canada. It is not clear how Willie Park Jr.’s original design may have been incorporated into the new plan.

C.54 In May 1935 the original clubhouse was destroyed by fire. The most recent clubhouse building was opened in 1957.

C.55 Discussions to move the course began in the 1960s, with the club acquiring 97 hectares (240 acres) of riverfront property south of Winnipeg in La Salle, Manitoba in 1966. A plan for a new twenty-seven-hole course was proposed, but by 1976 it was clear that rezoning would not occur, and the property was sold by 1982. By the mid-2000s, riverbank erosion, encroaching residential development, and increased traffic were cited as reasons for relocation. Club membership ultimately approved the decision to relocate and build a 120-hectare (297-acre) golf course just south of Winnipeg’s St. Norbert neighbourhood.

C.56 An 1874 map of the current Fort Garry Campus and Southwood area shows it containing “Principally Poplar woods,” with areas of oak, elm and ash on what is now the core campus. This hints at the former ecology of this riverbank site when the Red River was allowed to overflow its banks, and when a different set of processes occurred on the land. The survey was done by George McPhillips and is titled “Plan of River Lots in the Parishes of St. Vital & St. Norbert”. The original map is housed at the Archives of Manitoba.

C.57 Today, patches of *Populus tremuloides* (trembling aspen), mature stands of *Quercus macrocarpa* (bur oak), and patches of mixed riverbottom forest remain as visible remnant traces of Southwood’s natural history. The majority of the land is a highly designed landscape that has been maintained for appearance in addition to the functional requirements for the game of golf.
Envisioning a Sustainable Campus Community at the University of Manitoba in Winnipeg, Canada
C.58 The Fort Garry Campus has a student population of 26,292, consisting of 3,006 graduate and 23,286 undergraduate students. This includes 1,814 Aboriginal students and 2,555 international students.

C.59 The total staff population at the Fort Garry Campus is 5,911.

- Professor, Associate, Assistant, Lecturer, Instructor (Full): 1015
- Other Academic (Full): 80
- Other Academic (Part): 1184
- Librarians (Full): 62
- Support (Full): 1873
- Support (Part): 1697

*All figures acquired through the Office of Institutional Analysis (OIA) and reflect Fall 2011 enrolment numbers.

** Figures reflect Fort Garry Campus only and therefore exclude the Faculties of Dentistry, Medicine, Pharmacy and the School of Medical Rehabilitation.

C.60 The faculties/schools at the Fort Garry Campus are:

- Faculty of Agricultural & Food Sciences
- School of Agriculture
- Faculty of Architecture
- School of Art
- Faculty of Arts
- Clayton H. Riddell Faculty of Environment, Earth and Resources
- Faculty of Education
- Faculty of Engineering
- Extended Education
- Faculty of Graduate Studies
- Faculty of Human Ecology
- I.H. Asper School of Business
- Faculty of Kinesiology and Recreation Management
- Faculty of Law
- Marcel A. Desautels Faculty of Music
- Faculty of Nursing
- Faculty of Science
- Faculty of Social Work
- University 1

C.61 Colleges at the Fort Garry Campus are:

- St. Andrew’s College
- St. John’s College
- St. Paul’s College

C.62 The faculty/schools at the Bannatyne Campus are:

- Faculty of Dentistry
- School of Dental Hygiene
- Faculty of Medicine
- School of Medical Rehabilitation
- Faculty of Pharmacy
C.IV | Significant Buildings by Precinct

A. Southwood

C.63 The only significant structure within the Southwood Precinct is the Southwood Golf and Country Club's former clubhouse. The clubhouse was designed by Architect George A. Stewart (1922-1994) who was awarded his BA (Arch.) from the University of Manitoba in 1948 and served as Director of the University of Manitoba Campus Planning Office from 1970 to 1982. The clubhouse has been deemed unsuitable for future use by the university, and will be demolished.

C.64 An existing communications tower and two maintenance sheds are also currently on the site but are not of any significance, and will be demolished.

B. Core Campus

C.65 Visually the Core Campus buildings are quite identifiable according to the era in which they were built. Early buildings constructed between 1910 and 1914 are Neoclassical, featuring red brick materials and Tyndall stone details. These buildings are typically associated with the old campus. Buildings constructed between 1915 and 1939 were influenced by the Collegiate Gothic style, while structures built from the late 1940s into the 1970s adhered more to a modernist architectural style. The 1980s were distinguished by shift from modern to postmodern influences. The 1990s onward has seen several new buildings constructed. These varying building types and periods of development have resulted in a somewhat fragmented pattern of buildings and open spaces.

C.66 Architect: Samuel Hooper (original plan); completed by V.W. Horwood, Provincial Architect.

Originally the Manitoba Agricultural College, this building houses administrative offices and is representative of the Neoclassical style of the first campus buildings. It is an iconic structure, with the exterior finished in salmon-red brick and local Manitoba limestone. Views towards this structure are directed by the Avenue of Elms along Chancellor Matheson Road.

C.67 Architect: Arthur A. Stoughton

Designed by Arthur A. Stoughton, once head of Architecture, the rough limestone exterior was a radical change from the red brick of the original campus buildings. The Tier Building has been used for social science and humanities teaching and research since it opened. It was built in the Collegiate Gothic style with an exterior of Tyndall Stone, a local limestone. The building provides enclosure and massing along the eastern edge of the University’s quadrangle.

C.68 Architect: Arthur A. Stoughton; renovations by George A. Stewart

This building was erected concurrently with the Tier Building in the same Collegiate Gothic style. It contains mostly laboratories, classrooms, and offices, in addition to housing the Department of Microbiology.

C.69 Architect: Green Blankstein Russell Associates

Completed in 1952, the Elizabeth Dafoe Library also saw additions completed in 1963, 1970, and interior renovations in 2012. It has a Tyndall stone exterior and is the main campus library. It also houses the Faculty of Arts’ Psychological Service Centre.
St. John’s is a founding college of the University. Its building complex includes a chapel, residence, classrooms, and administrative and office areas, all of which have exteriors of quarry-dressed local Tyndall stone.

C.71 Architects: Gardiner Thornton Gathe Associates with associate architects Green Blankstein Russell Associates
St. Paul’s houses classrooms, a chapel, and a library, and is characterized by its visually distinct bell tower (at one time the tallest structure on campus) as well as its large west-facing mosaic. Much of the exterior is Tyndall Stone, and the chapel superstructure is a hollow rigid frame of concrete weighing approximately 800 tons, which is supported by four piers hidden in the end walls. The tower can be seen from the Southwood Precinct.

C.72 Architect: Smith Carter Searle Associates
The Russell Building was constructed for the Faculty of Architecture, which is still housed there. It contains studio spaces and classrooms, administrative offices, and the Architecture/Fine Arts Library. Its international modern style is noticeable in the exterior glass and metal ‘curtain wall’ as well as the precast concrete piers and spandrels. Restorations to the building were completed by LM Architectural Group in 2006, and Hilderman Thomas Frank Cram redesigned the courtyard in 2009.

C.73 Architect: Number Ten Architectural Group
University Centre is a major hub of activity on campus. It houses the University’s book store, the Student Union’s offices, major campus food services, and a range of student services and commercial establishments. It also contains several conference and meeting rooms. Many of its services and amenities are below grade. Concrete, both poured in place and precast, is the primary building material.

C.74 Architect: Number Ten Architectural Group
This is the University’s main active living building, housing a pool, weight training areas, three gymnasiums, squash and racquetball courts, an indoor running track, and a dry sauna. It is also home to the Faculty of Kinesiology and Recreation Management.

C.75 Architect: Ward MacDonald and Partners
Home to the Faculty of Law, Robson Hall is three storeys high, with its third floor projecting over the west main entry and supported by precast concrete columns, giving it an almost classical feel. It is faced in rough-hewn, random-patterned Tyndall Stone in combination with precast concrete panels.

C.76 The Max Bell Centre contains an ice hockey arena (home to the University’s men’s and women’s hockey teams), as well as an athletic field house with running tracks and spaces for other sports.

The Engineering Complex consists of buildings from different eras. The original Engineering Building, completed in 1912, faces the south side of the quadrangle. Additions were built in 1949 and 1967, with the most recent completed in 2005. The three main buildings are linked by a central atrium, and the north side of the complex borders much of the Curry Place pedestrian mall.

C.78 Architect: Prairie Architects
As the University’s first LEED building (certified LEED Gold), Migizii Agamik welcomes students twenty-four hours a day with support facilities. At its centre, the Circle Room provides space for ceremonies and classes that require a collaborative, sacred space. The building provides a venue for many of the teachings of the Indigenous Peoples of the area.
C.79  Architect: Patkau Architects

The recently completed Art Research Technology Lab building is a multidisciplinary art and technology centre for the University's School of Art. It contains a wide range of studio, classroom, office, and teaching spaces. The building is also connected to adjacent Taché Hall. The north and south facades are vertical green walls constructed of aluminum screens that support *Parthenocissus quinquefolia* (virginia creeper).

C.80  Original Architect: Samuel Hooper and V.H. Horwood; renovations Patkau Architects

The largest of the original campus buildings, Taché Hall is located on the south side of the quadrangle. Its façade stretches the full one hundred and sixty-eight meters of this green space. The building is currently being renovated and expanded to accommodate the Faculty of Music, which has outgrown its current building and is spread across various campus locations. Taché Hall is scheduled to reopen in 2014.

C. Smartpark

C.81  All of the buildings in Smartpark have been built over the last ten years with the creation of the precinct and are typically for tenant rental.

D. Sport and Active Living

C.82  This open-air stadium was originally constructed for the 1967 Pan-American Games and upgraded with a new track and other facilities for the 1999 Pan-American Games. A large grandstand on the west side seats 5,000 people with space for up to 10,000 people when temporary seating is installed.

C.83  The Winnipeg Soccer Federation's indoor complex houses a full soccer pitch along with twelve dressing rooms.

C.84  Architect: Raymond S.C. Wan

This new stadium will hold approximately 33,500 people with potential to expand to 40,000 for larger events. The stadium will be the new home of the Winnipeg Blue Bombers (the city's professional Canadian football team) as well as the University of Manitoba Bison football team.

E. Transition

C.85  The Federal Government Department of Fisheries and Oceans Freshwater Institute is located between Smartpark and the Core Campus. Opened in 1972, it is on land leased from the University.
C.86 Buildings are categorized here on the basis of their primary function. Although some buildings contain functions beyond the category they are placed, the main intention is to show how buildings are currently used.
### Academic, Research, and Administration

C.87 The majority of academic, research and administration buildings are located within the Core Campus.

<table>
<thead>
<tr>
<th>BLDG#</th>
<th>Building Name</th>
<th>Gross Area (sq. m.)</th>
<th>Gross Area (sq. ft.)</th>
<th>Year</th>
<th>Age (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>011</td>
<td>AGRICULTURE BUILDING</td>
<td>8,511</td>
<td>91,608</td>
<td>1958</td>
<td>54</td>
</tr>
<tr>
<td>012</td>
<td>AGRICULTURAL ENGINEERING</td>
<td>1,836</td>
<td>19,759</td>
<td>1914</td>
<td>98</td>
</tr>
<tr>
<td>014</td>
<td>AGRICULTURAL LECTURE BLOCK</td>
<td>685</td>
<td>7,369</td>
<td>1914</td>
<td>98</td>
</tr>
<tr>
<td>015</td>
<td>ANIMAL SCIENCE / ENTOMOLOGY</td>
<td>8,709</td>
<td>93,744</td>
<td>1962</td>
<td>50</td>
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<tr>
<td>016</td>
<td>ANIMAL SCIENCE EQUIPMENT SHED</td>
<td>687</td>
<td>7,397</td>
<td>1962</td>
<td>50</td>
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<tr>
<td>020</td>
<td>CROP TECHNOLOGY CENTRE</td>
<td>1,692</td>
<td>18,216</td>
<td>1925</td>
<td>87</td>
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<tr>
<td>021</td>
<td>T.K CHEUNG ANIMAL RESEARCH CENTRE</td>
<td>1,243</td>
<td>13,375</td>
<td>1991</td>
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<tr>
<td>025</td>
<td>PLANT SCIENCE</td>
<td>2,252</td>
<td>24,237</td>
<td>1961</td>
<td>51</td>
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<tr>
<td>026</td>
<td>CWB GRAIN RESEARCH LABORATORY</td>
<td>1,565</td>
<td>16,847</td>
<td>2000</td>
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<td>027</td>
<td>DAIRY SCIENCE BUILDING</td>
<td>1,079</td>
<td>11,610</td>
<td>1914</td>
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<tr>
<td>028</td>
<td>DAIRY BARN ART STUDIO</td>
<td>1,356</td>
<td>14,596</td>
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<tr>
<td>031</td>
<td>ENTOMOLOGY HONEY HOUSE</td>
<td>109</td>
<td>1,176</td>
<td>1961</td>
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<td>OVERWINTERING BUILDING</td>
<td>84</td>
<td>901</td>
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<td>033</td>
<td>PLANT SCI. PESTICIDE &amp; FERTILIZER STOR.</td>
<td>27</td>
<td>288</td>
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<td></td>
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<tr>
<td>034</td>
<td>PLANT SCI. CANOLA PROCESSING &amp; STOR.</td>
<td>54</td>
<td>576</td>
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<tr>
<td>037</td>
<td>ELLIS BUILDING</td>
<td>6,483</td>
<td>69,787</td>
<td>1966</td>
<td>46</td>
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<td>144</td>
<td>1,548</td>
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<td>8,958</td>
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<td>040</td>
<td>PLANT SCIENCE SEED PROCESSING</td>
<td>507</td>
<td>5,460</td>
<td>1967</td>
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<td>041</td>
<td>PLANT SCIENCE EQUIPMENT STORAGE</td>
<td>343</td>
<td>3,689</td>
<td>1961</td>
<td>51</td>
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<td>047</td>
<td>RESEARCH ANNEX</td>
<td>248</td>
<td>2,668</td>
<td>1945</td>
<td>67</td>
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<tr>
<td>050</td>
<td>POULTRY CAGE-LAYING HOUSE</td>
<td>862</td>
<td>9,281</td>
<td>1977</td>
<td>35</td>
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<tr>
<td>052</td>
<td>POULTRY SERVICE BUILDING</td>
<td>184</td>
<td>1,979</td>
<td>1960</td>
<td>52</td>
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<tr>
<td>053</td>
<td>SOIL SCIENCE EQUIPMENT SHED</td>
<td>691</td>
<td>7,440</td>
<td>1970</td>
<td>42</td>
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<td>054</td>
<td>POULTRY BROODING &amp; GROWING</td>
<td>669</td>
<td>7,200</td>
<td>1977</td>
<td>35</td>
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<tr>
<td>061</td>
<td>SEA-ICE BUILDING</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>065</td>
<td>STRAW BALE BUILDING/ALTERNATIVE VILLAGE</td>
<td>442</td>
<td>4,757</td>
<td>2004</td>
<td>8</td>
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<tr>
<td>081</td>
<td>HUMAN ECOLOGY BUILDING</td>
<td>4,694</td>
<td>50,522</td>
<td>1914</td>
<td>98</td>
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<tr>
<td>111</td>
<td>FLETCHER ARGUE BUILDING</td>
<td>8,337</td>
<td>91,889</td>
<td>1967</td>
<td>45</td>
</tr>
<tr>
<td>113</td>
<td>ISBISTER BUILDING</td>
<td>5,680</td>
<td>61,135</td>
<td>1961</td>
<td>51</td>
</tr>
<tr>
<td>115</td>
<td>TIER BUILDING</td>
<td>6,863</td>
<td>73,875</td>
<td>1932</td>
<td>80</td>
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<tr>
<td>117</td>
<td>DRAKE CENTRE</td>
<td>13,750</td>
<td>148,001</td>
<td>1987</td>
<td>25</td>
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<tr>
<td>131</td>
<td>UNIVERSITY COLLEGE LECTURE HALL</td>
<td>6,811</td>
<td>73,311</td>
<td>1964</td>
<td>48</td>
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<tr>
<td>142</td>
<td>ROBERT B. SCHULTZ THEATRE</td>
<td>1,473</td>
<td>15,853</td>
<td>2008</td>
<td>4</td>
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<td>146</td>
<td>SINNOTT BUILDING</td>
<td>1,742</td>
<td>18,751</td>
<td>1964</td>
<td>48</td>
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<tr>
<td>151</td>
<td>ALLEN PHYSICS BUILDING</td>
<td>9,816</td>
<td>105,655</td>
<td>1961</td>
<td>51</td>
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<td>152</td>
<td>ARMES LECTURE THEATRE</td>
<td>5,001</td>
<td>53,827</td>
<td>1961</td>
<td>51</td>
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<tr>
<td>153</td>
<td>PARKER CHEMISTRY BUILDING</td>
<td>10,817</td>
<td>116,437</td>
<td>1961</td>
<td>51</td>
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<tr>
<td>154</td>
<td>ENERGY RESEARCH LABORATORY</td>
<td>402</td>
<td>4,331</td>
<td>1971</td>
<td>41</td>
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<tr>
<td>155</td>
<td>MACHRAY HALL</td>
<td>11,536</td>
<td>124,175</td>
<td>1972</td>
<td>40</td>
</tr>
</tbody>
</table>
### Colleges

There are three affiliated colleges, all located within the Core Campus.

<table>
<thead>
<tr>
<th>BLDG#</th>
<th>Building Name</th>
<th>Gross Area (sq. m.)</th>
<th>Gross Area (sq. ft.)</th>
<th>Year</th>
<th>Age (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>141</td>
<td>ST. JOHN’S COLLEGE</td>
<td>5,308</td>
<td>57,134</td>
<td>1961</td>
<td>51</td>
</tr>
<tr>
<td>145</td>
<td>ST. PAUL’S COLLEGE</td>
<td>9,023</td>
<td>97,127</td>
<td>1961</td>
<td>51</td>
</tr>
<tr>
<td>147</td>
<td>ST. ANDREW’S COLLEGE</td>
<td>5,821</td>
<td>62,659</td>
<td>1963</td>
<td>49</td>
</tr>
</tbody>
</table>
Student Residences

C.89. The university currently has four residence buildings with 1164 students living in dorm style housing. In 2012 approximately fifty-five percent of bed spaces were used by new incoming students, forty-five percent by returning or upper years and thirty-three percent international students. Only 3.9% of enrolled students live in student residence spaces.

C.90. The St. John's College Residence building provides space for an additional one hundred students.

<table>
<thead>
<tr>
<th>BLDG#</th>
<th>Building Name</th>
<th>Gross Area (sq. m.)</th>
<th>Gross Area (sq. ft.)</th>
<th>Year</th>
<th>Age (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>133</td>
<td>UNIVERSITY COLLEGE RESIDENCE</td>
<td>10,294</td>
<td>110,809</td>
<td>1964</td>
<td>48</td>
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<tr>
<td>143</td>
<td>ST. JOHN'S COLLEGE RESIDENCE</td>
<td>2883</td>
<td>31,032</td>
<td>1961</td>
<td>51</td>
</tr>
<tr>
<td>345</td>
<td>PEMBINA HALL (FOOD SERVICES)</td>
<td>4033</td>
<td>43,406</td>
<td>1964</td>
<td>48</td>
</tr>
<tr>
<td>346</td>
<td>PEMBINA HALL RESIDENCE</td>
<td>11,808</td>
<td>127,103</td>
<td>2011</td>
<td>1</td>
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<tr>
<td>347</td>
<td>MARY SPEECHLY RESIDENCE</td>
<td>6798</td>
<td>73,172</td>
<td>1964</td>
<td>48</td>
</tr>
<tr>
<td>349</td>
<td>ARTHUR V MAURO STUDENT RESIDENCE</td>
<td>11,808</td>
<td>127,103</td>
<td>2003</td>
<td>9</td>
</tr>
</tbody>
</table>

Amenities

C.91. Most amenities and services are housed in University Centre in the Core Campus. This building contains most student services, a small food court, a convenience store, a restaurant, and a pub, along with many other administrative offices, student organizations, a clinic, and other services. It also contains a coffee shop with pool tables and small gathering spaces. The campus daycare is located adjacent to St. Andrew's College.

<table>
<thead>
<tr>
<th>BLDG#</th>
<th>Building Name</th>
<th>Gross Area (sq. m.)</th>
<th>Gross Area (sq. ft.)</th>
<th>Year</th>
<th>Age (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>303</td>
<td>UNIVERSITY CENTRE</td>
<td>22,492</td>
<td>242,105</td>
<td>1970</td>
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<tr>
<td>334</td>
<td>WELCOME CENTRE</td>
<td>953</td>
<td>10,253</td>
<td>2010</td>
<td>2</td>
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<tr>
<td>371</td>
<td>CAMPUS DAY CARE CENTRE</td>
<td>469</td>
<td>5,045</td>
<td>1991</td>
<td>21</td>
</tr>
</tbody>
</table>

Amenities - Recreation/Active Living

C.92. The majority of recreation/active living structures occur within the Sport and Active Living Precinct and the western edge of the Core Campus Precinct along University Crescent. Facilities such as the Frank Kennedy Centre and Joyce Fromson pool are available to the general public.

<table>
<thead>
<tr>
<th>BLDG#</th>
<th>Building Name</th>
<th>Gross Area (sq. m.)</th>
<th>Gross Area (sq. ft.)</th>
<th>Year</th>
<th>Age (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>309</td>
<td>FRANK KENNEDY CENTRE</td>
<td>19,202</td>
<td>206,691</td>
<td>1972</td>
<td>40</td>
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<tr>
<td>311</td>
<td>JOYCE FROMSON POOL</td>
<td>3487</td>
<td>37,533</td>
<td>1964</td>
<td>48</td>
</tr>
<tr>
<td>315</td>
<td>INVESTORS GROUP ATHLETIC CENTRE</td>
<td>6191</td>
<td>66,641</td>
<td>1998</td>
<td>14</td>
</tr>
<tr>
<td>316</td>
<td>MAX BELL CENTRE</td>
<td>13,804</td>
<td>148,581</td>
<td>1982</td>
<td>30</td>
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<td>317</td>
<td>UNIVERSITY STADIUM</td>
<td>797</td>
<td>8,583</td>
<td>1967</td>
<td>45</td>
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<tr>
<td>318</td>
<td>PHYSICAL EDUCATION FIELD HOUSE</td>
<td>393</td>
<td>4,234</td>
<td>1967</td>
<td>45</td>
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</table>
C.93 In addition to Physical Plant’s Central Energy Plant, other service and maintenance buildings are located throughout the Fort Garry Campus.

<table>
<thead>
<tr>
<th>BLDG#</th>
<th>Building Name</th>
<th>Gross Area (sq. m.)</th>
<th>Gross Area (sq. ft.)</th>
<th>Year</th>
<th>Age (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>370</td>
<td>STORAGE TRAILER (Carpentry Shop)</td>
<td>187</td>
<td>2,016</td>
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<tr>
<td>603</td>
<td>FLOOD PUMP HOUSE</td>
<td>25</td>
<td>264</td>
<td>1956</td>
<td>56</td>
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<tr>
<td>604</td>
<td>PHYSICAL PLANT TRAILER 'A'</td>
<td>61</td>
<td>660</td>
<td></td>
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<tr>
<td>605</td>
<td>PHYSICAL PLANT TRAILER 'B'</td>
<td>65</td>
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<tr>
<td>609</td>
<td>PHYSICAL PLANT</td>
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<td>21,760</td>
<td>1975</td>
<td>37</td>
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<tr>
<td>610</td>
<td>PHYSICAL PLANT STORAGE #1</td>
<td>609</td>
<td>6,555</td>
<td>2001</td>
<td>11</td>
</tr>
<tr>
<td>615</td>
<td>CENTRAL ENERGY PLANT</td>
<td>6,466</td>
<td>69,598</td>
<td>1914</td>
<td>98</td>
</tr>
<tr>
<td>617</td>
<td>STORES BUILDING</td>
<td>2,024</td>
<td>21,781</td>
<td>1960</td>
<td>52</td>
</tr>
<tr>
<td>619</td>
<td>WATERWORKS</td>
<td>1,306</td>
<td>14,056</td>
<td>1914</td>
<td>98</td>
</tr>
<tr>
<td>621</td>
<td>EAST GENERATOR BUILDING</td>
<td>2011</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>622</td>
<td>NORTH GENERATOR BUILDING</td>
<td>2011</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>625</td>
<td>ENVIRONMENTAL SAFETY BUILDING</td>
<td>907</td>
<td>9,761</td>
<td>2005</td>
<td>7</td>
</tr>
</tbody>
</table>

Parking Structure(s)

C.94 One parking structure currently exists within the Core Campus.

<table>
<thead>
<tr>
<th>BLDG#</th>
<th>Building Name</th>
<th>Gross Area (sq. m.)</th>
<th>Gross Area (sq. ft.)</th>
<th>Year</th>
<th>Age (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>284</td>
<td>UNIVERSITY PARKING STRUCTURE</td>
<td>13,711</td>
<td>147,583</td>
<td>1999</td>
<td>13</td>
</tr>
</tbody>
</table>
Smartpark

C.95 Smartpark contains several buildings that house various technology, research, and innovation companies.

<table>
<thead>
<tr>
<th>BLDG#</th>
<th>Building Name</th>
<th>Gross Area (sq. m.)</th>
<th>Gross Area (sq. ft.)</th>
<th>Year</th>
<th>Age (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>979</td>
<td>196 INNOVATION DRIVE (RICHARDSON CENTRE)</td>
<td>5,749</td>
<td>61,877</td>
<td>2006</td>
<td>6</td>
</tr>
<tr>
<td>980</td>
<td>150 INNOVATION DRIVE</td>
<td>2,289</td>
<td>24,642</td>
<td>2010</td>
<td>2</td>
</tr>
<tr>
<td>981</td>
<td>135 INNOVATION DRIVE</td>
<td>2,800</td>
<td>30,140</td>
<td>2002</td>
<td>10</td>
</tr>
<tr>
<td>983</td>
<td>137 INNOVATION DRIVE</td>
<td>2,581</td>
<td>27,777</td>
<td>2003</td>
<td>9</td>
</tr>
<tr>
<td>984</td>
<td>ONE RESEARCH ROAD BUILDING</td>
<td>3,937</td>
<td>42,380</td>
<td>2005</td>
<td>9</td>
</tr>
<tr>
<td>985</td>
<td>EVENT CENTRE</td>
<td>654</td>
<td>7043</td>
<td>2011</td>
<td>1</td>
</tr>
<tr>
<td>986</td>
<td>CIC CENTRE</td>
<td>473</td>
<td>5086</td>
<td>2005</td>
<td>7</td>
</tr>
<tr>
<td>987</td>
<td>ITC CENTRE</td>
<td>1,768</td>
<td>19,032</td>
<td>2005</td>
<td>7</td>
</tr>
<tr>
<td>988</td>
<td>100-78 INNOVATION DRIVE (MONTERIS MEDICAL)</td>
<td>839</td>
<td>9028</td>
<td>2004</td>
<td>8</td>
</tr>
<tr>
<td>1048</td>
<td>155 INNOVATION DRIVE (CANGENE CORPORATION)</td>
<td>15,329</td>
<td>165,000</td>
<td>Various</td>
<td></td>
</tr>
</tbody>
</table>

Additional Buildings

C.96 These additional buildings are on University land, but are occupied by outside organizations, sometimes in cooperation with University programs.

<table>
<thead>
<tr>
<th>BLDG#</th>
<th>Building Name</th>
<th>Year</th>
<th>Age (2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>319</td>
<td>WINNIPEG INDOOR SOCCER COMPLEX</td>
<td>2008</td>
<td>4</td>
</tr>
<tr>
<td>320</td>
<td>INVESTORS GROUP FIELD</td>
<td>2013</td>
<td>1</td>
</tr>
<tr>
<td>1015</td>
<td>AGRICULTURE CANADA CEREAL RESEARCH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1017</td>
<td>GREENHOUSES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1018</td>
<td>FIELD SERVICES BUILDING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1019</td>
<td>CROP TECHNOLOGY CENTRE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1020</td>
<td>VOLATILE STORAGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1021</td>
<td>STORAGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1022</td>
<td>AGRICULTURE CANADA NORTH WING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1031</td>
<td>MANITOBA AGRICULTURE &amp; ANIMAL INDUSTRY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1034</td>
<td>FRESHWATER INSTITUTE</td>
<td>1972</td>
<td></td>
</tr>
<tr>
<td>1041</td>
<td>CORE STORAGE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Future Project Sites on Fort Garry Campus
C.97 The University is expanding its current recreational facilities. At approximately 9,290 square metres (100,000 square feet), the new Active Living Centre will include elements such as a new running track, a climbing wall, a social gathering area for students, a strength and conditioning room, a group workout area, and three multipurpose rooms. The ground-breaking for this facility took place in October 2012, with a prospective completion date of 2014.

C.98 A new vertical parking structure is being contemplated for the Core Campus. This is likely to be in the southern portion, near the existing student residence buildings. This new structure is still in early discussion phases.

C.99 A new student dormitory-style residence building is also currently under discussion for the Core Campus. This would probably be located near existing residence buildings in the southern portion of the Core Campus. This new building is still in early discussion phases.

C.100 A new office building is being created to house one hundred and fifty of the University’s External Relations staff within the Smartpark Precinct.

C.101 Four new tennis courts are planned within the Sport and Active Living Precinct.

Temporary Buildings

C.102 The following buildings can be considered temporary, and as present areas of opportunity. However, the University is currently undergoing a large-scale Space Master Plan for the Fort Garry Campus buildings that, when completed, will provide a clearer picture regarding the future location, removal, and addition of buildings.

- 028 Dairy Barn Art Studio
- 053 Soil Science Equipment Shed
- 158 Fine Arts Annex
- 273 Marcel A. Desautels Music Annex One
- 337 Music Annex Two (Services Building)
- 619 Waterworks
- 031 Entomology Honey House
- 032 Overwintering Building
- 033 Plant Sci. Pesticide & Fertilizer Storage
- 034 Plant Sci. Canola Processing & Storage
- 038 Plant Science Vegetable Storage
- 039 Plant Science Field Station
- 040 Plant Science Seed Processing
- 041 Plant Science Equipment Storage
- Southwood Clubhouse and Maintenance Structures
Significant Public Spaces on Site
C.VI | Significant Public Spaces on Site

C.103 The Duckworth Quadrangle (officially named in 1992) has been maintained as a major public open space on campus since the first layout of the Agricultural College. Commonly referred to as the quad, it is a focal point of outdoor activity, particularly in summer, and is a well-known campus landmark. In winter it is covered with a large ice-skating rink. It also represents the western anchor of the campus’ traditional axis, which extends through Curry Place and along the Chancellor Matheson Road Avenue of Elms.

C.104 Landscape Architect: Scatiff Miller Murray
Curry Place is the campus’ main pedestrian mall and a significant outdoor meeting place. Outdoor access from University Crescent into the Core Campus was severed with the construction of the Extended Education building adjacent to the Frank Kennedy Centre in 1972. The creation of a walkway over the Extended Education building was constructed in the 2000s. While the connection is efficient, the experience in the winter months can be unpleasant on cold, windy days and the rooftop space does not do enough to signify a sense of arrival into the Core Campus.

C.105 Landscape Architect: Hilderman Thomas Frank Cram
The UMSU Roof Deck is an outdoor space adjacent and connected to University Centre. Renovations to the original design were undertaken by Hilderman Thomas Frank Cram. This space is also adjacent to the Curry Place pedestrian mall. It incorporates mature trees as well as garden spaces, seating, and tables.

C.106 Princess Royal Walk is a pedestrian and cycling pathway running north-south between Ralph Campbell Road and Curry Place, containing benches and bike storage racks. Its name commemorates the Princess Royal’s visit to the University during the 1999 Pan-American Games.

C.VII | Ecology and Existing Vegetation

C.107 An inventory of trees, shrubs and shrub beds was conducted on the Fort Garry Campus during the spring of 2000. In total approximately 7,600 individual trees, eighty percent of them deciduous were inventoried. The ten most abundant species were Fraxinus pennsylvanica, Salix spp., Tilia americana, Ulmus americana, Picea glauca, Ulmus pumila, Picea pungens, Pinus sylvestris, Acer ginnala, and Malus spp., making up over seventy-seven percent of the total number (see Fort Garry Campus Tree Inventory in appendices for more information). This Inventory includes data on tree condition, diameter at breast height (DBH) in centimetres, height and spread; this information has not been updated since 2000.

C.108 The riparian zone along the banks of the Red River is an important and significant ecological area. A Riparian Forest Inventory was also conducted in 2000. The most prevalent species of trees are Fraxinus pennsylvanica and Ulmus Americana. The average age of mature trees in this area at the time of the study was eighty-five years, with younger trees ranging from twenty-five to sixty years. Sub-dominant and intermediate species consist of Acer negundo, Quercus macrocarpa, Tilia Americana, Ulmus Americana, and Fraxinus pennsylvanica (see Riparian Forest Inventory in appendices for more information).

C.109 A City of Winnipeg Natural Areas Assessment of the riverbank around the Point Lands was done in 2003. It documented flora species found in the area (see Report for Habitat Site 861 in appendices for more information).
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Page 112

Curry Place, UofM

Curry Place, UofM

Curry Place, Jonathan Hildebrand

Curry Place, Jonathan Hildebrand

Princess Royal Walk, UofM

Quadrangle, UofM

UMSU Roof Deck, UofM

UMSU Roof Deck, Dustin Dilts
C.110 A Natural Features assessment was done in 2012 indicating the trees in the Southwood Precinct that are of a diameter greater than sixty-one centimetres when measured at a height of either 1.0 or 1.3 metres. Generally trees within the precinct fall into two categories: those that were planted and those that remain as remnant traces of a landscape found prior to that of its use as a golf course (see Planning Brief: Point Lands & Southwood Lands Site Analysis in appendices for more information).

C.111 Two species of non-native weeds that are of major concern were found during the Natural Features assessment. *Rhamnus cathartica* (European buckthorn) is scattered in the Southwood Precinct and *Euphorbia esula* (leafy spurge) has been found in the southeast corner of the riverbank in the Point Lands Precinct. If not controlled, the spread of these species can cause significant habitat decline.

C.112 A detailed Tree Inventory of the former Southwood Golf Course will be completed following the competition.

C.113 In 2010, in partnership with the Province of Manitoba's Trees for Tomorrow Program, 10,000 tree seedlings consisting of *Populus x jaackii* 'Northwest', *Populus x Walker', and *Populus x Tristis* were planted in the Smartpark Precinct along Pembina Highway (Parcel B of Smartpark).

C.114 The river itself is home to a wide range of fish species including *Esox lucius* (northern pike), *Cyprinus carpio* (common carp), *Ictalurus punctatus* (channel catfish), *Hiodon alosoides* (goldeye), *Stizostedion vitreum* (walleye), *Stizostedion canadense* (sauger), *Aplodinotus grunniens* (freshwater drum), and *Amiurus melas* (black bullhead), among numerous others.

C.115 Areas of the campus are also utilized by the *Branta Canadensis* (Canada Goose) during migration periods in the spring and fall. This is the case particularly in more open and spread-out areas such as the Southwood, Smartpark, Sport and Active Living, and Community Gardens precincts.

C.116 *Danaus plexippus* (monarch butterfly) is another local species for consideration. It is the only species of milkweed butterfly to appear in Manitoba and makes the longest migration of any butterfly in the world, going from Manitoba to Mexico each year.

C.117 Additional information about local flora and fauna species is available in the publication *Naturescape Manitoba*. The key tables and resources sections have been provided as an appendix.  
www.winnipeg.ca/publicworks/Naturalist/ns/ 
www.winnipeg.ca/publicworks/naturalist/ns/natural_areas/default.asp 
www.naturemanitoba.ca/ 
www.mwf.mb.ca/wp/resources-for-anglers/fishing-in-winnipeg/
Major Streets and Public Transportation Accessing the Site
C.IX | Transport and Accessibility

Major Streets Accessing the Site

C.118 Pembina Highway runs along the western edge of the site and is a main arterial corridor containing six lanes of traffic, with a maximum speed limit of sixty kilometres per hour along the site area. On average, it carries between 35,300 and 45,100 vehicles per week in the area near the site, and is one of Winnipeg’s busiest thoroughfares. OurWinnipeg’s Complete Communities direction strategy refers to it as a “regional mixed-use corridor”.

C.119 Chancellor Matheson Road is the primary access point into the campus. It connects to Pembina Highway and consists of four traffic lanes with a tree-lined median between them. This is the University’s historic Avenue of Elms that defines the axis running east-west through the campus. The east-bound lanes are directly in line with the Administration Building. The road carries an average of 13,100 vehicles per weekday, with a speed limit of seventy kilometres per hour (Chancellor Matheson becomes Bison Drive west of Pembina Highway).

C.120 University Crescent is the second main access point into the Campus. It branches off from Pembina Highway and accesses the site through the Southwood Precinct, and continues through to the Fort Richmond neighbourhood south of the site. It intersects with Chancellor Matheson Road and several secondary streets along the way. It consists of four traffic lanes, with gravel shoulders and open ditches along the outside edges, with a speed limit of fifty kilometres per hour. The most-used section of University Crescent, from Pembina Highway to Chancellor Matheson Road, carries between 17,300 and 23,900 vehicles per weekday on average. University Crescent used to have a streetcar line that connected Downtown Winnipeg to the Agricultural College.

C.121 King’s Drive is a two-lane residential street in the Fort Richmond neighbourhood that accesses the campus to the south, at Freedman Crescent, with a speed limit of fifty kilometres per hour.

Most of these main thoroughfares also connect to larger arterials and expressways. Bishop Grandin Boulevard is an expressway containing between four and eight lanes running east-west through the southern portion of the city. It carries an average of 75,000 vehicles per weekday. It also intersects with several major arterial roads. The closest of these arterials to the site are Kenaston Boulevard, Waverley Street, and Pembina Highway.

Major Streets within the Site (East-West)

C.122 Aside from Chancellor Matheson Road, the most prominent east-west vehicle corridor through the site is Innovation Drive in the Smartpark Precinct, which becomes Dafoe Road east of University Crescent, in the Core Campus precinct.

C.123 Markham Road runs east-west through Southwood, connecting Pembina Highway and University Crescent. This stretch of Markham Road is gravel, and not paved. East of University Crescent, Markham Road connects to the former clubhouse of the golf course. This road is currently not in good condition, and does not need to be considered as a permanent road location for future development.
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Dafoe Bus Stop, [phase eins].

Osborne Bus Station, [phase eins].

City Context and Site Location, Dustin Dilts

Existing Rapid Transit line, Dustin Dilts

Rapid Transit Network to 2031, Dustin Dilts
C.124 Freedman Crescent/Saunderson Drive/Dysart Road/Sifton Road: these roads comprise a loop around the Core Campus. Freedman Crescent begins at University Crescent at the southern edge of the site. It follows the Red River toward the Point Lands precinct, where it loops north and becomes Saunderson Drive. Saunderson becomes Dysart Road as it loops back toward the west, merging into Sifton Road, which continues to complete the loop and provide westbound access to University Crescent.

C.125 Ralph Campbell Road begins to run east-west from Sidney Smith Street, and then turns north as it becomes Sifton Road. It is also the main road accessing the University’s parking structure in the centre of the Core Campus.

C.126 Research Road is located in Smartpark and runs between Chancellor Matheson Road and Innovation Drive. It consists of four traffic lanes divided by a grass-covered median.

C.127 Research Way runs parallel to Research Road, between Chancellor Matheson Road and Innovation Drive. South of Innovation Drive, it becomes a service road.

C.128 Sidney Smith Street is located in the Central Campus and runs from Sifton Road to the Max Bell Centre and the Education Building, intersecting Dysart Road and Ralph Campbell Road along the way.

C.129 MacLean Crescent and Alumni Lane both provide north-south connections between Dafoe Road and Freedman Crescent.

C.130 Gillson Street is in the heart of the Core Campus, providing vehicle access to and from the Administration building, which is encircled by Chancellor’s Circle and several small parking lots.

C.131 Several service roads also run through the site. The speed limit on all campus streets is thirty kilometres per hour unless otherwise posted.

C.132 Twelve bus routes service the site – seven via University Crescent, four via King’s Drive, and two via Chancellor Matheson Road. Five of these are express routes, and five also utilize the City’s new Southwest Rapid Transit Corridor. The terminus for these routes is the Dafoe Road transit terminal located within the Core Campus just south of the Administration Building and Duckworth Quadrangle. Seventy-four percent of transit trips to and from the campus utilize this terminal. Several smaller bus stops also service Smartpark.

C.133 Phase two of the City’s new Southwest Rapid Transit Corridor will provide service to the general site area, although the exact routing has yet to be determined (Phase one runs between Downtown and the intersection of Pembina Highway and Jubilee Avenue; Phase two will continue southward from there to the university). The City of Winnipeg has held public consultations as part of the preliminary Southwest Rapid Transit Corridor Phase Two process (see the City of Winnipeg Public Open House Display Boards for Southwest Rapid Transit Stage 2 in appendices for more information). The final report is not yet available for release.

C.134 MMM Group’s Transit Oriented Development Opportunities with the Southwest Rapid Transit Corridor report, prepared for the University of Manitoba, indicates a preference for a new BRT station within the Southwood Precinct, to the north of Investors Group Field. The extension of the rapid transit line near the site could present opportunities for mixed-use transit oriented development.

Envisioning a Sustainable Campus Community at the University of Manitoba in Winnipeg, Canada

Campus Shuttle Bus, Parking Lots and Underground Pedestrian Tunnel System
Winnipeg previously had an extensive streetcar network that serviced the city and the University of Manitoba’s Fort Garry Campus. The route went down University Crescent, Pembina Highway, Jubilee and then Osborne Street before arriving downtown. Winnipeg's final streetcar line was fully dismantled and replaced by diesel buses in 1955. The Southwest Corridor Study completed in the 1970s recommended that a rapid transit system should be considered in order to alleviate the projected congestion of Pembina Highway. A variety of other studies, reports and recommendations have occurred over the years, but for a variety of reasons were never realized.

The University also provides a free shuttle bus service for staff and students at the Fort Garry Campus from late August until the end of April. The express shuttle runs weekdays from 7:30 AM to 9:00 AM, and the regular shuttle runs weekdays from 9:00 AM to 5:00 PM.

Since the campus is currently geared toward private vehicle use, parking lots are distributed throughout the campus. Most of these are surface lots. The University's only parking structure is also located in the Core Campus. Markham Road, in the Southwood Precinct, is also used for street parking, as are some residential streets in the surrounding neighbourhoods. The presence of so many large surface parking lots has resulted in a physically spread-out campus, hampering walkability, pedestrian-scale development, and accessibility. Currently there are 5,840 ground level parking stalls on campus in addition to 430 in Smartpark and 496 in the parking structure. There is no consideration for the retention or treatment of surface water from parking lots before it enters the land drainage system and eventually the Red River, and no permeable parking surfaces.

High reliance on private vehicle travel has resulted in the pedestrian and bicycle experience on campus being neglected. Sidewalks line most of the main streets, although much of Smartpark lacks dedicated pedestrian paths or sidewalks. There are also no dedicated bicycle lanes on the site, although multi-use paths run along either side of Chancellor Matheson Road, and a widened ‘shoulder bikeway’ exists on a portion of University Crescent north of Dysart Road. The recently redesigned Curry Place pedestrian mall is a main walking and cycling link through the Core Campus, connecting to the Duckworth Quadrangle. It intersects with Princess Royal Walk, another pedestrian corridor. Multi-use paths also run along either side of Chancellor Matheson Road. The campus is connected underground through an extensive underground pedestrian tunnel system. Bike racks are situated in various locations throughout the campus. The City’s Transportation Master Plan identifies proposed active transportation links through Southwood and along Pembina Highway. It also proposes a possible active transportation link across the Red River into the Point Lands.

The South Winnipeg Parkway, a walking trail consisting of dedicated active transportation paths as well as existing sidewalks, runs through the site along University Crescent, connecting the southern portion of Winnipeg to The Forks Downtown. On the campus, this trail consists only of existing sidewalks. The Parkway is also part of the Trans-Canada Trail. To the north of the site, the Bishop Grandin Greenway is a multi-use path running along Bishop Grandin Boulevard. Across the Red River to the east, the South St. Vital trail is a dedicated bicycle path bisecting the neighbourhood of River Park South. It continues through to Henteleff Park, which is directly south of the Point Lands.
Envisioning a Sustainable Campus Community at the University of Manitoba in Winnipeg, Canada

Surrounding Neighbourhoods

- Agassiz
- Waverly Heights
- Fairfield Park
- Richmond West
- Fort Richmond
- Minnetonka
- River Park South
- Montcalm
- Normand Park
- Waverley West

© [phase eins]
C.X | Surrounding Neighbourhood Context

C.140 The campus is adjacent to several neighbourhoods identified by OurWinnipeg (the city’s official planning document) as “recent communities.” These are generally residential suburbs built after the 1950s, and are located within the larger area known as Fort Garry South.

C.141 Agassiz is made up predominantly of single-detached houses, with a small private elementary school and playing field located in the centre of the neighbourhood. Glengarry Park, a small green space along the Red River, is located on the eastern edge of the neighbourhood. Approximately seventy percent of residents are university-educated, well above the Winnipeg average. Most households consist of families of two people or more, and 45.5 percent of the population is over fifty-five years of age, compared to 24.5 percent citywide. The vast majority of people travel by automobile, with 13.9 percent taking public transit and 5.6 percent cycling.

C.142 Montcalm is a relatively small neighbourhood consisting of several different uses. It contains the large portion of the Southwood Precinct west of University Crescent, as well as Victoria General Hospital along Pembina Highway just north of the campus. This commercial strip of Pembina Highway contains restaurants, fuel stations, clothing and home furnishing stores, grocery stores, pharmacies, and financial institutions, among other amenities. Large surface parking lots service this area. Most housing in the area consists of multi-unit dwellings, with a small pocket of single-detached houses located along Thatcher Drive. The Southwood Green condominiums are located in this neighbourhood just to the north of the hospital. This award-winning housing project was built in 1967 with parking located underneath a roof-deck structure that contains greenery, social spaces and pedestrian circulation areas. Thirty-nine percent of the population is between the ages of twenty and twenty-nine, reflecting a large university student population. Nearly eighty percent of all households consist of one or two people, and ninety-two percent of the population lives in rental housing. Over half the population travels by automobile, with nineteen percent taking public transit, twelve percent walking, and two percent cycling.

C.143 Immediately west of Montcalm, Waverley Heights is a residential neighbourhood consisting mostly of single-detached dwellings, with some apartments and row houses. The area is characterized by curvilinear streets and contains a large amount of green space, with parks located near three retention ponds. There are also two elementary schools and one high school in the neighbourhood. The Waverley Heights Community Centre provides programming and green space for the area. Over half the neighbourhood’s households have three or more people, and eighty-four percent of the dwellings are owned rather than rented. Eighty-two percent of the population travels primarily by automobile, while eleven percent use public transit, 4.4 percent walk, and 1.8 percent cycle.

C.144 Fairfield Park is a small neighbourhood immediately south of Waverley Heights currently still being developed. Most of its dwellings are single-detached, and much of its northwest corner is still undeveloped. A large grocery and department store sits in the northeast corner, along with a financial institution and a new multi-unit residential development. A few small parks are located throughout the area, along with two churches, a commercial strip along Pembina Highway to the west, and a retention pond approximately in the centre of the neighbourhood. Also, the Letellier railway line runs north-south through the neighbourhood, just west of the Pembina Highway strip.

C.145 South from Fairfield Park along Pembina Highway is Richmond West. This largely residential neighbourhood contains mostly single-detached houses, with some semi-detached houses, row houses, and several apartment buildings. The commercial strip of Pembina Highway sits to the west. There is also some light manufacturing in the...
southeast corner of the neighbourhood. The area has an elementary school, along with three parks and a retention pond. Eighty-four percent of the population owns their dwellings. Most people use automobiles as their main source of transportation, while twelve percent use public transit, 1.4 percent walk, and 1.2 percent cycle.

C.146 Most of Fort Richmond consists of single-detached houses, although there are also many multi-unit buildings, particularly in the northwest corner, and south along Pembina Highway where there are several large apartment buildings. The neighbourhood has four schools, several churches, a recreation complex and pool, a large community centre, and several parks and green spaces. The largest of these is King’s Park, located along the Red River in the southeast portion of the neighbourhood. There are also two entrances to the campus at King’s Drive and University Crescent, both in the northeast corner of Fort Richmond. The area has a higher percentage of renters than some of the other neighbourhoods near the University, although 64.7 percent of the dwellings are owner-occupied. Seventy-five percent of the population travels by automobile. Other modes of transportation are used slightly more than in some of the surrounding neighbourhoods; 14.4 percent use public transit, 6.1 percent walk, and 3.6 percent cycle.

C.147 Minnetonka is a residential neighbourhood consisting mostly of single-detached houses and some low-rise apartment buildings, and over ninety percent of the population owns their own dwellings. Over eighty-five percent of households contain two or more people, and over a quarter of the neighbourhood’s households comprise four or more people. The Red River forms the western and southern boundaries of the area. To the east, St. Mary’s Road is a major mixed-use corridor providing commercial amenities and other services. St. Vital Centre, a large suburban shopping mall, is located just to the northeast. St. Amant Centre, a large health institution, is located near the Red River. The neighbourhood is also served by several parks, two schools, and a community centre.

C.148 The northwestern edge of River Park South sits directly across the Red River from the Point Lands Precinct. The majority of dwellings are single-detached houses, and over eighty-six percent of the population owns their own dwellings. Eighty-five percent of the population travels primarily by automobile. There are several parks in the neighbourhood including the large Dakota Park, which is also the site of a community centre. The neighbourhood also contains a library, two nursery schools, a French Immersion high school, and two elementary schools.

C.149 Normand Park is a small neighbourhood situated between St. Mary’s Road to the east and the Red River to the west. It sits across the river from the Point Lands and the Core Campus. Henteleff Park sits on the northern edge of the neighbourhood along the river. Over ninety percent of the population travels by automobile. Dwellings consist largely of single-detached houses, and all dwellings are owner-occupied.

C.150 A major retail area is located around the intersection of Kenaston and McGillivray Boulevards, roughly eight kilometres northwest from the campus. This development contains large outlet and ‘big box’ stores, a large movie theatre, restaurants, grocery stores, and other services and amenities.

C.151 Just north of the Kenaston-McGillivray retail area, at the Sterling Lyon Parkway, is a brand new commercial ‘big box’ development still under construction, called ‘Seasons of Tuxedo.’ An IKEA furniture store is among the anchor tenants.

C.152 A large suburban residential development, Waverley West, is currently being developed approximately six kilometres southwest from the University of Manitoba. Bordered by Bishop Grandin Boulevard to the north, the Perimeter Highway to the south, and Waverley Street to the east, this area already contains the neighbourhoods of Bridgewater Forest and South Pointe, with much of it currently undeveloped.

C.153 A new condominium development is being planned to replace the current Montcalm Hotel and Monty’s nightclub located on Pembina Highway just north of the Victoria General Hospital. The hotel and nightclub building is intended to be demolished to make way for a proposed four-storey, eighty-four-unit complex.
Map of Surrounding Parks and Commercial Services
C.VIII | Surrounding Parks Amenities

C.154 St. Vital Park sits to the north of the campus, and north of Bishop Grandin Boulevard. Nestled along the Red River, it occupies 48 hectares (118 acres). It includes walking and cycling trails, a soccer pitch, a children’s play structure, rock and flower gardens, picnic shelters and fire pits, a boat launch, and a duck pond (open for ice skating in the winter). Other winter amenities include cross-country ski trails and toboggan slides.

C.155 King’s Park sits to the south of the campus between the Fort Richmond neighbourhood and the Red River. It occupies 42 hectares (104 acres) and includes baseball fields, a large pond and gardens, an off-leash dog park, picnic tables, and walking trails.

C.156 Henteleff Park is a relatively recent park of 17 hectares (42 acres). It is located across the river from the southern portion of the Point Lands on the former site of a tree nursery. A creek runs through the park, and there are also walking trails and benches. Remnants of shelter plantings from the former tree nursery and natural riparian forest provide important wildlife habitat and a distinctive experience for visitors.

Maple Grove Park is situated south of the campus, across the river from King’s Park and Fort Richmond and north of the Perimeter Highway. It is 85 hectares (160 acres) in size and contains several rugby pitches and other playing fields, a dog park, and a clubhouse facility.

C.XI | Commercial Amenities and Development

C.157 Commercial amenities and services (aside from those provided within the Core Campus Precinct) are generally not within walking distance of the main campus area. Outside of University Centre, the campus currently contains few if any amenities such as grocery stores, restaurants, and other services. There is a small restaurant located on Research Road in Smartpark, and a canteen in in the Freshwater Institute.

C.158 Pembina Highway borders the western edge of site, and is the closest commercial area. This section of Pembina Highway includes grocery stores, several restaurants, hotels, fuel stations, banks, clothing and furniture stores, and other services. Further North on Pembina Highway (just north of Bishop Grandin Boulevard) is Pembina Crossing, a retail centre containing a sporting goods store, fitness centre, department store, pet store, office supply store, financial institution, and several restaurants. A large regional grocery and department store (Superstore) is located west of Pembina Highway on Bison Drive. In Fort Richmond, at the corner of Dalhousie Drive and Silverstone Avenue, there is a small commercial area containing a daycare, dentist office, convenience store, insurance broker, and restaurant. Pembina Highway also continues to the south of the site.

Victoria General Hospital is a 231-bed facility with more than 1,200 staff and 350 volunteers. It is located along Pembina Highway, bordering the northwest corner of the site. St. Amant, a large resource and programming facility for people with developmental disabilities and autism, is located just across the Red River from the site. There are also several schools close to the site within the surrounding neighbourhoods: four elementary schools, two junior high schools, and one high school. Two community centres service the general area: Richmond Kings Community Centre in Fort Richmond, and Waverley Heights Community Centre in Waverley Heights.
C.159 Two major commercial areas are located in the wider surroundings around the site. Roughly six kilometres northeast of the site is St. Vital Centre, a large suburban shopping mall containing over 160 stores in addition to a large movie theatre. Approximately seven kilometres to the northwest is a large retail area along Kenaston Boulevard, which contains several ‘big box’ stores and a range of restaurants, grocery stores, and other amenities.

The Margaret Grant Pool is located further from the site, in the southern portion of Fort Richmond. Two elementary schools are also located in the wider surroundings of Fort Richmond and Richmond West.

C.XII | Zoning Regulations and Planning Law

C.160 The Winnipeg Charter Act of 2002 states that City Council must adopt a development plan outlining the City's long-term plans and policies. OurWinnipeg is the City's current official development plan guiding growth and change. It took effect in August 2011, and lays out a twenty-five-year vision for the entire city. Four separate Direction Strategy documents are companions to the overall plan: Complete Communities, Sustainable Water and Waste, A Sustainable Winnipeg, and Sustainable Transportation. Of these companion documents, the Complete Communities Direction Strategy was approved as a secondary plan for the city as a whole. The recently approved Winnipeg Transportation Master Plan is also based on OurWinnipeg and the Sustainable Transportation Strategic Direction document.

C.161 Future development of the site, including Southwood, must therefore bear in mind the principles in OurWinnipeg and Complete Communities, particularly their emphasis on compact urban form and on communities that support various lifestyles; provide a range of living options for living, working, and playing; allow for daily necessities to be within reach; contain a range of housing options for varying households and incomes; and ensure mobility for people of all ages and abilities through a range of transportation options, including enhanced public transit and active transportation.

C.162 The site itself sits within an area defined by OurWinnipeg as an “area of stability” containing “recent communities,” while Southwood is designated as a “major redevelopment site.” Major redevelopment sites present opportunities for “mixed use infill and intensification in existing urban areas.”

C.163 Winnipeg has two zoning bylaws. The City of Winnipeg Zoning Bylaw No. 200/2006 covers the entire city except for Downtown, which is covered by a separate zoning bylaw, the Downtown Winnipeg Zoning Bylaw 100/2004. According to the Winnipeg Zoning Bylaw, the Core Campus, Sport and Active Living, Community Gardens, Transition, and Point Lands Precincts are zoned as “Educational and Institutional” (EI). EI zoning is intended to provide for large and significant areas containing multi-building, public, quasi-public, or private facilities (for example, schools, places of worship, universities, hospitals, and cultural facilities). A change in zoning is not anticipated for the areas zoned EI, as EI zoning allows for a variety of commercial and non-commercial uses that support the main functions of the zone’s main facilities and population. These would be considered as accessory uses.

C.164 The Smartpark Precinct is zoned as “Manufacturing Mixed Use” (MMU), which is intended to provide linked commercial and industrial activities such as offices, wholesale and business establishments, industrial or business parks, while allowing more flexibility of uses and requiring a higher standard of landscape and design. MMU zones permit uses such as supportive retail development to a maximum of thirty-five percent of the site area.
Map of Public Utilities and Delivery Zones
C.165 Rezoning will be required for the Southwood Precinct, which is currently zoned as “Parks and Recreation 2 – Community” (PR2). Future development of Southwood will therefore necessitate a change in zoning, which could present an opportunity to explore alternative approaches to zoning, such as form-based rather than use-based zoning.

C.166 Within each zoning district certain land uses are permitted outright, others are conditional upon approval, and some are prohibited. Although larger institutions and buildings are generally the intended principal use for EI zones, many other types of uses are permitted. For example, multi-unit dwellings and various types of group living, community gardens, public parks and plazas, are among some of the other permitted uses in EI zones. Also, while EI is not intended to be a commercial zone, commercial or non-commercial uses that support the function of the main facility or its population would be considered accessory uses. Similarly, MMU zones permit uses such as supportive retail development to a maximum of thirty-five percent of the site area.

C.167 There are 250-millimetre water mains under both Pembina Highway and University Crescent, which could service the Southwood Precinct. There is also existing water service to other precincts with the exception of the Point Lands.

C.168 A 1,250-millimetre city wastewater interceptor sewer crosses the campus through Smartpark, and runs north along University Crescent to Pembina Highway. Because it has sufficient depth and flow capacity, wastewater from development of the entire Southwood Precinct could be directed to the interceptor sewer under University Crescent without resorting to pumps. There is also existing wastewater service to other precincts with the exception of the Point Lands.

C.169 Surface water is generally collected in catch basins or swales and directed towards the river overland or through underground pipes connecting to outfalls located along the Red River (an outfall refers to the end of a pipe that protrudes through the riverbank into the river and is usually submerged below the normal summer river levels). Surface water entering the land drainage system through catch basins is not treated for pollution or contamination before it enters the Red River and the greater watershed.

C.170 Within Smartpark water is collected in two storm water retention basins (SRB) before being discharged slowly through a downstream pipe into the river.

C.171 Electricity within the boundary of the Fort Garry Campus is acquired through Manitoba Hydro, the hydroelectric and natural gas utility in Manitoba.
District heating is already provided within the Core Campus through the Central Energy Plant (CEP). The CEP was first erected between 1911 and 1913 as it was more efficient and cost effective to have centralized heating sources. In 1965 an addition was added to expand the plant’s capacities. The plant provides steam, heat recovery, chilled water, and emergency power.

The CEP is equipped with six boilers rated at a total horsepower of 13,500 or 132,000 kilowatts. Four of the boilers produce superheated steam at 862 kPa – kilopascal (125 psi – pounds per square inch) and 246 degree Celcius (475 degrees Fahrenheit). Two boilers produce saturated steam at 690 kPa (100 psi) and 178 degrees Celsius (353 degrees Fahrenheit). The steam is utilized for building heating, and current maximum demand is approaching 58,967 kilograms per hour (130,000 pounds per hour).

The plant is also equipped with a flue gas heat recovery system. The system extracts heat from the boiler exhaust gas. The energy is then transferred to campus buildings for heating.

The Central Chilled Water Plant was completed in 2002. It is equipped with six York Millennium Chillers, each rated at 1,542 metric tonnes (1,700 tons). The equipment provides water at a temperature of 5.5 degrees Celsius (42 degrees Fahrenheit) for circulation to our buildings for air conditioning.

A 2,000-kilowatt generator was installed in 2003. The equipment provides a backup power supply to the Central Energy Plant and several other buildings on campus in the event of a loss of electrical power.

On campus, beverage containers, paper/cardboard, fluorescent lamps, e-waste, batteries, cell phones, toners, and other items are collected for recycling.

The University does not have a composting program to collect compost from students and staff at this time.

All organic yard/garden waste (leaves, grass, small branches, twigs are collected by Physical Plant grounds employees and transported to the University of Manitoba Students Union (UMSU) Community Gardens on site. The organic waste is composted for use in the garden. Larger branches are collected by Physical Plant and chipped for use as mulch.

Garbage is collected and taken off site daily by Physical Plant employees using a Physical Plant garbage truck. In 2011/2012 the University of Manitoba sent 1,567 metric tonnes (1,727 tons) of waste to the Brady Road landfill at the southwest corner of the city.

The City of Winnipeg is currently served by three major landfills: the Brady Road Landfill and two private landfill facilities located in the Rural Municipalities of Rosser and Richot. The City operates and maintains the Brady Road Landfill, a 790-hectare (1,952-acre) Class 1 waste disposal facility that currently holds approximately eight million metric tonnes of waste. It is the only active landfill within city limits and is located south of the Perimeter Highway between Brady Road and Waverley Street, 6.5 kilometres southwest from the University of Manitoba Fort Garry Campus.

The City of Winnipeg has a plan to reduce methane gas from the Brady Road Landfill which involves capturing and possibly using the methane as an energy source. A request for proposal was issued in 2010 for the project.

www.winnipeg.ca/waterandwaste/garbage/projects/BradyRoadMethaneGas/default.stm
C.182 The Province of Manitoba through regulation 266/91 defines “Floodway” and “Floodway Fringe” areas. This is endorsed through regulations in the City of Winnipeg Charter Act.

C.183 The Floodway Line follows the upper bank of the Red River. No development is allowed within this area (see map on the opposite page). The Floodway Fringe Line on the campus also follows the upper bank of the river, except in the Point Lands. There the line runs north-south along Saunderson Street between the Point Lands and Core Campus Precincts. Since the Point Lands Precinct falls within a designated flood fringe area, no buildings can be constructed unless they meet specific flood proofing criteria or the dike is raised to PLD levels.

C.184 Within the city there is a primary dike system called the Primary Line of Defense (PLD) that protects land along the Red and Assiniboine Rivers from flooding. Property owners are responsible for any flood protection outside of these protected areas.

C.185 The current PLD follows University Crescent to the south of the campus, then heads north along Freeman Crescent, Saunderson Street and Dysart Road to Sifton Road, before finally continuing as University Crescent through the Southwood Precinct.

C.186 Within the Southwood Precinct, the land east of University Crescent falls outside the PLD. Therefore any development in these areas would require the establishment of a new primary dike with an approximate finished elevation of 232.2 metres. If the entire eastern side of the Southwood Precinct were to be developed, a dike of 525 metres in length would need to be built along the river approximately 0.5 metres high (see Planning Brief: Point Lands & Southwood Lands Site Analysis in appendices for more information). New PLDs need to be designated as public property, and vehicular access must be provided in case the PLD needs to be raised in an emergency. The Point Lands Precinct also falls outside of the existing PLD.

C.187 Manitoba is at the eastern edge of the vast sloping plains that comprise the southern regions of the Prairie Provinces (Alberta, Saskatchewan and Manitoba), and contains the lowest and most uniform topography.

C.188 Within the boundary of the competition site, the topography is generally very flat. Exceptions include the berms on either side of Chancellor Matheson Road, and the berms forming the edge between Smartpark and the adjacent residential neighbourhoods to the south. The Point Lands also have significant earthworks to protect them from flooding.

C.189 Noticeable low points within the site include the two retention ponds in Smart Park, and the lawn south of the Architecture II building. No detailed records of topographic elevations are kept for the campus.

C.190 Detailed topographic information is available for the land along the Red River, within the Point Land and for the Southwood Precincts only.

C.191 The geological structure of Southern Manitoba, including Winnipeg, consists mainly of Ordovician limestone beds. Bedrock in the Winnipeg area is approximately eighteen to twenty-one metres below surface. Site-specific geotechnical investigations conducted in 1984 for the ‘Admin. Transportation Building’ (now Drake Centre) found auger refusal at ‘suspected bedrock’ or ‘boulders’ (till) at depths between 16.8 to 17.7 metres. The resistant layer of till is made up of angular irregular rock fragments from clay to boulder size approximately one to two metres deep in the area. Surface elevations for these test holes were at geodetic elevations varying between 232.8 and 233.45 metres.
C.192 During the Pleistocene ice age, the central portion of North America was covered by the Wisconsin continental glacier, which first started in the north and advanced southward. As the ice sheet melted starting in the southeast and southwest, water was unable to flow northward due to the position of the glacial ice sheets. This caused overland flooding as melt-water formed a lake known as Lake Aggasiz.

C.193 Evidence suggests that Lake Agassiz grew to a full size of over 1,100 kilometres long and 400 kilometres wide before the ice had receded enough to uncover a northern drainage outlet. The current site of Winnipeg would have been over 152 metres deep during this period.

C.194 Within the Winnipeg area, the subsoils generally consist of lacustrine and fluvial deposits of clay and silty clays.

C.195 The Red and Assiniboine Rivers, and their tributary streams, cut sinuous channels inside relatively straight belts through the glaciolacustrine deposits of Lake Agassiz to form their present day configurations. The height of the riverbanks along the Red and Assiniboine Rivers generally ranges from nine to fifteen metres. Inside bends generally consist of alluvial sediment, while outside bends are comprised of glaciolacustrine material. Transition sections contain alluvial deposits overlying glaciolacustrine material. Floodplain banks are formed by alluvial deposits.

C.196 Failure-controlled banks represent slope failures on outside bends or transition sections of the Red and Assiniboine Rivers, where the slip surface is located in cohesive, low strength glaciolacustrine material. The failures are deep-seated, twelve to fifteen metres below ground surface, and typically continue to fail until a slope of 6H:1V (Horizontal : Vertical) to 9H:1V is achieved. Outside bends are generally considered stable at a slope of 9H:1V, while transition sections are typically considered stable at a slope of 6H:1V. History has shown that the potential for slope movement decreases when the slope angle of an outside bend is 9H:1V and the slope angle of a transition section is 6H:1V. Slope movement on a failure-controlled bank may extend as far back as eighty metres from the river’s edge. Consequently, a significant amount of property loss for both the City and private landowners has occurred. The principal factors governing failure-controlled banks are groundwater, river hydraulics, and progressive soil weakening.

C.197 The 2006 KGS report on the existing ninth hole at the pre-existing Southwood golf course identifies the ongoing instability that has occurred over the prior decade. Located at the downstream end of an outside bend, the instability is a typical deep-seated movement. Methods to remediate the stability include, from least costly to most costly: re-grading the bank to a shallower angle, the placement of a rip-rap toe berm, and installation of a rock shear key or rock column reinforcement. In addition to stabilization measures, it is critical to place adequate erosion protection such as additional vegetation to limit the ongoing erosion that leads to over steepening of the riverbank (see Measuring the load-deformation response of rockfill columns by full-scale field test on a natural riverbank and Landslide problems in Winnipeg in appendices for more information).

C.198 There is an extensive water supply underlying the Winnipeg area, referred to as the Upper Carbonate aquifer. Early European settlers drew water from the river; however as people moved back from the river in the nineteenth century, individual and community-owned wells provided water that was delivered by horse-drawn carriages.

C.199 Underground water would become an important source for both municipal and industrial water in the early twentieth century, contributing to a down-drawn cone in the central industrial area of Winnipeg, which also has the lowest piezometric surface in the Winnipeg area. Consumption of groundwater peaked in 1919 when the aqueduct was completed (see Geohydrology of the metropolitan Winnipeg area as related to Groundwater supply and construction in appendices for more information).
Envisioning a Sustainable Campus Community at the University of Manitoba in Winnipeg, Canada

Red River, [phase eins].

Fort Garry Campus, Dustin Dilts

Fort Garry Campus, UofM

Fort Garry Campus, Dustin Dilts
C.200 A series of test wells and monitoring sites are located within the Winnipeg region. Test well ‘G05oc005 Winnipeg 067’ is located at the south-east corner of the Agriculture Building at the University of Manitoba Fort Garry Campus with a ground elevation of 232.15 metres. A hydrograph (showing groundwater levels) for this location was created by Manitoba Water Stewardship (see Groundwater Hydrograph in appendices for more information).

C.201 The region’s high water table makes groundwater a concern and restriction when building underground. For example, the typical phreatic (i.e. piezometric) surface at the Investors Group Field site is about seven metres below grade or at a geodetic elevation of 224.5 metres. According to an AMEC report for Investors Group Field, this is consistent with the sub-artesian pressures known to exist within the till at the University of Manitoba.

C.202 According to the same AMEC report, “an average annual frost penetration depth of 2.4 metres is expected”.

C.203 No major known soil contamination issues are known. There may be some soil contamination as a result of agricultural chemical use in the Point Lands Precinct, but this is unproven.

Climate and Environmental Influences

C.204 Manitoba experiences a continental climate due to its location in the centre of North America and vast distance from any moderating coastal influences, resulting in four distinct seasons. It is the province with the greatest range of temperatures and is well known for long, harsh winters. The city’s prairie region is located in a broad band of global circumpolar westerly winds that pull cool air down from the Arctic, and are stronger in the winter when compared to summer months.

C.205 With an average winter temperature of -19.6 degrees Celsius and an average summer temperature of 26.1 degrees Celsius, Winnipeg experiences a temperature variation of over sixty degrees Celsius when winter wind chill is taken into account.

C.206 The city also enjoys over 2,300 hours of sunshine per year and more than 2,700 hours of clear skies on average per year – the most of any Canadian city.

C.207 Average annual perception is 664 millimetres, fifty-six millimetres of which is snowfall (note: fifty-six centimetres of snow is equal to fifty-six millimetres of precipitation). Snowfall typically occurs from November to March, but sporadic occurrences are also common earlier or later, usually in January and December.

C.208 June is by far the rainiest month with an average of 182 millimetres annually, followed by 136 millimetres in July, and less than 100 millimetres in August as the summer comes to an end.

C.209 Winnipeg’s location in the middle of the wide, shallow, north-to-south Red River Valley has a noticeable effect on wind patterns. Southerly winds are channelled through the Red River Valley adding to their intensity and duration. Northwesterly winds are another frequently and predominant wind direction experienced within Winnipeg.

C.210 In the winter, winds from the south and northwest are more pronounced and intense. Frigid air masses from the north-west bring chilled Arctic air that is strong and are usually accompanied by wind chills and restricted visibilities due to blowing snow.

C.211 While no measured monitoring or studies of light pollution on campus have been completed, lighting is often not as well-considered as it should be. For example un-used parking lots remain highly illuminated all night.

C.212 Major noise concerns come from the larger roadways of Pembina Highway, University Crescent, Chancellor Matheson, and the new stadium during event days.

C.213 230 metres above sea level.