

AN ACTIVE TRANSPORTATION STRATEGY FOR QUEEN'S UNIVERSITY



DECEMBER 2013

EXECUTIVE SUMMARY

Introduction

Project Background

The intent of this report is to provide Kingston, Frontenac and Lennox & Addington (KFL&A) Public Health with **An Active Transportation Strategy for Queen's University**. The recommendations in the report are designed to inform decision-making and planning efforts to increase physical activity levels through improved use of active transportation (AT) to, from, and on campus, which will ultimately increase physical activity levels of students, staff, and faculty at Queen's University. This may also offer insights for other employers to increase AT among their employees.

For this study, two separate study boundaries were delineated. The greater boundary included the area of Kingston serviced by Kingston Transit, and is addressed in general strategies and recommendations for students, staff and faculty. A more thorough examination of preferred routes was done for the areas within a two-kilometre distance from the centre of Queen's University.

Information was collected from a variety of sources, which allowed for the development of a comprehensive AT strategy to improve the conditions for walking, cycling, and multimodal commuting trips to, from, and on campus.

What is Active Transportation?

AT is any form of human-powered transportation such as walking or cycling.

What is an Active and Preferred Route?

An active and preferred route is one that offers a convenient, attractive, efficient, safe, connected, accessible, and pleasant route for commuting.

What is an Active Transportation Strategy?

An Active Transportation Strategy is a plan that provides a vision for AT infrastructure, programs, and policies. The guiding questions addressed in the strategy are:

- Where are we now?
- Where do we want to go?
- How do we get there?

WHERE ARE WE NOW?

Background Research

Benefits, Costs, and Determinants of AT

AT is a topic at the forefront of the planning profession due to its potential to improve both public and environmental health. AT can provide significant benefits to population health and community well-being by increasing levels of physical activity, and simultaneously reducing greenhouse gas emissions by reducing the number of motor vehicle trips. Costs associated with AT are largely related to initial installation investments, which allow for sustained, long-term benefits to be realized.

Identifying the determinants of AT is a valuable exercise for improving and encouraging active commuting. Built environment determinants of AT include safety, aesthetics, density, connectivity, and land-use mix. Logistical influences include

proximity to frequent destinations and integration of public transportation. Socio-demographic and personal determinants include age, physical activity, income and employment. A final determinant of AT is political will of government at every level.



Space required to fit 60 people on a bus, 60 people on bicycles, and 60 people in cars

Source: ecooptimism.com

Kingston Context

Kingston is a medium sized Canadian city with a population of 123,363. Typical of most Canadian cities, the private automobile remains the dominant mode of travel to work. However, Kingston has a notably high proportion of permanent residents who walk or cycle to work, with rates that are approximately double the national average. As well, the Kingston Census Metropolitan Area (CMA) boasts the second highest rate of AT commuting in Canada. There are significant concentrations of students, faculty and staff who live in the area surrounding Queen's University that would benefit from improvements to all modes of AT.

Kingston has many plans that address AT through infrastructure, policies, and programs. Notable plans and policies include: Cycling and Pathways Study, Transportation Master Plan, Sustainable Kingston Plan, Parks and Recreation Master Plan, Traffic Calming Policy, and relevant by-law amendments. These plans can serve as a springboard and guide for AT initiatives and efforts at the University.

WHERE DO WE WANT TO GO?

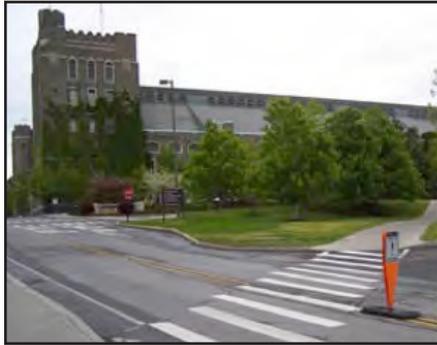
Best Practice Precedents

A review of best practices informed the recommendation of appropriate strategies for AT within and around the Queen's University Campuses. The precedent case studies chosen include five Canadian locations and five international ones. They were selected because they exhibit campus and citywide AT strategies, and have similarities to Queen's University and Kingston.

Common Elements and Viable Solutions for Queen's University and Kingston:

WALKING - Lessons Learned

- Pedestrian priority areas on campus
- Pedestrian-scale streets and car-free zones
- Walking route maps with distances and times
- Pedestrian activated crossings
- Walking route networks



Marked Mid-block Crosswalk

Source: Cornell University

CYCLING – Lessons Learned

- Comprehensive cycling supports, including ample end-of-trip facilities
- Extensive cycling infrastructure
- Enhanced lane markings and signage
- Bike rental program on campus
- Campus bike centre for repair, maintenance, education, and loans
- Cycle-friendly routes and facilities
- Bike registration system
- Bike share system
- Secure bike storage
- Bicycle regulation and enforcement
- Bicycle advisory committee
- Cycling route networks



Bike Box,

Source: Western University

MULTI-MODAL – Lessons Learned

- Flexible parking program
- Use of existing City resources
- Discounted bus pass for students and employees
- Commuter Challenge Event for employees
- Public transit system with year-round bike racks and storage
- Guaranteed Ride Home Program
- Interactive mapping tools
- Park and Ride / Park and Bike / Park and Walk infrastructure
- Real-time transit information
- Employee AT incentive programs



**Indoor Bike Storage
at a Bus Station**

Source: University of Wisconsin

Primary Research Findings

The findings are based on several information sources, including preliminary research, precedent analyses, interviews and a workshop.

The precedents we reviewed served as a springboard for ideas, from which we were able to better define and identify details of what might comprise an AT strategy for Queen's University and how it could be implemented. The precedents highlighted

that an AT strategy must be a practical and well-planned course of action that involves an arsenal of policies, programs, and infrastructure implemented over time through the collaboration of numerous key stakeholders and public engagement.

Key informant interviews provided valuable information about AT challenges and successes at Queen's and in Kingston. Our interviewees clarified that, given the distribution of student and employee residences (students are concentrated closer to the university, where employees are more spread out across the city), the AT strategy would need to address the complex two-pronged issue of how to both increase and improve conditions for active commuting to the University.

The workshop corroborated many of the findings identified in the background research, precedents, and interviews. Notably, participants showed the greatest interest in two categories of AT promotion: cycling initiatives and infrastructure improvements. They saw the improvement of cycling infrastructure as the biggest challenge and gap in the current AT context.

Discussion also revolved around the need to remove barriers and threats to AT, and to approach the promotion of AT in a way that recognizes the differing needs of cyclists, pedestrians, and multi-modal users, as well as those who live farther or closer to the University. All groups identified partnerships and increased communication as means to ensure successful implementation.

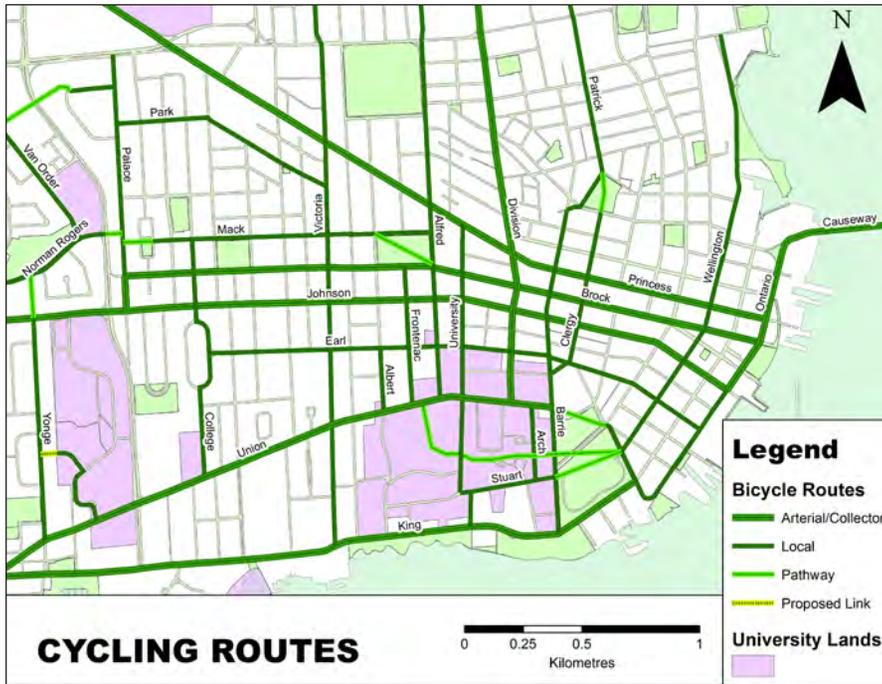
HOW DO WE GET THERE?

Recommendations

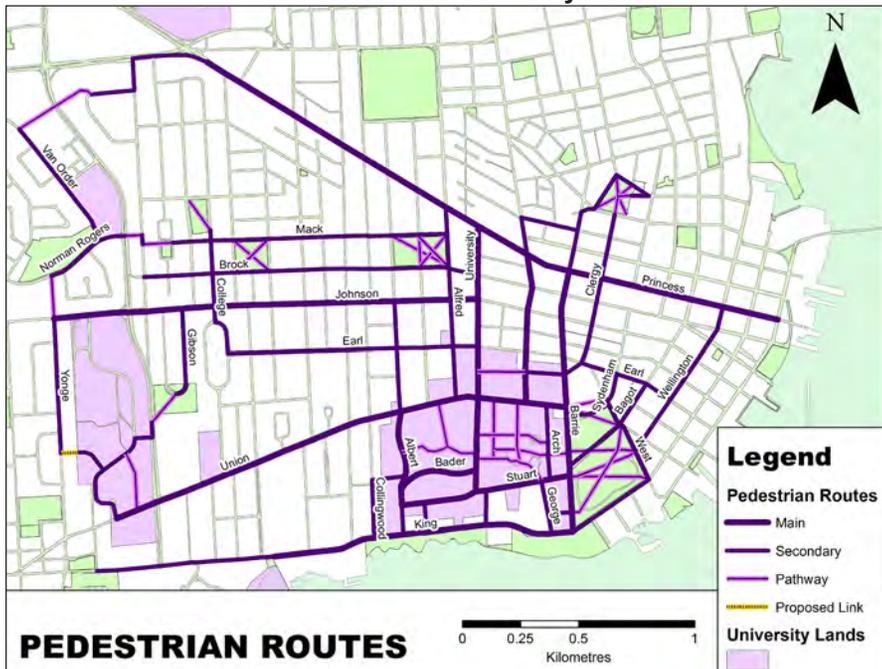
A total of 38 recommendations are outlined in four chapters in this report, which respectively are priority routes, walking, cycling, and multimodal recommendations. Every recommendation addresses one or more facets of encouraging and facilitating AT, and is an important component of the comprehensive strategy. From this list, ten recommendations have been selected as key recommendations. While all of the recommendations are imperative to a comprehensive AT strategy, these ten highlighted recommendations, which cover a range of programs, policies, and infrastructural improvements, could have the most impact for Queen's University.

- Improve Pedestrian Crossings
- Implement Traffic Calming Measures
- Encourage Participation in Walk to Work Programs
- Lobby for Changes to the Ontario Highway Traffic Act
- Improve Bicycle Parking on Queen's Campuses (Bicycle Lockers and Covered Parking)
- Promote Cycling Awareness
- Improve Maintenance of Designated Bike Lanes
- Create Transit Stop Linkages
- Facilitate the Provision of Discounted Employee Public Transit Passes
- Do Not Subsidize Motor Vehicle Parking

Identified Cycling Priority Routes



Identified Pedestrian Priority Routes



Implementation and Partnerships

Various stakeholders are required to implement the recommendations presented in this report, over both the short- and long-term time frames. Particularly, KFL&A Public Health, Queen’s University, and the City of Kingston will be responsible for specific areas of improvement in which they have the experience, knowledge, jurisdiction, and capacity to implement. Many of the recommendations will require the formation of partnerships between key stakeholders for successful implementation.

Conclusion

This report presents findings from preliminary research on the subject and develops a series of planning and design guidelines for promoting AT amongst the Queen’s community. The ultimate goal of this report is to increase the number of active commuting trips to and from campus by encouraging more faculty, students and staff to incorporate AT into their daily routine. This can be achieved through policies, programs, and improvements to the current infrastructure for walking, cycling, and multi-modal transportation. Through appropriate partnerships and implementation, KFL&A Public Health can use the recommendations in this report in continuing to foster a healthy and more sustainable campus and city. Although directed for implementation at Queen’s University, the recommendations are designed to be adaptable for the use and benefit of other employers.