Executive Summary

Conventional suburban development has created car-oriented, socially isolating and environmentally unsustainable places. Transforming them into livable, accessible, and sustainable places is a critical challenge facing Canadian cities. Professionals and academics from various fields, including planning, are collaborating to develop methods to address the challenges posed by conventional suburbs. As a result, there exists a growing body of literature that discusses methods for retrofitting the built environment into more sustainable places.

The objective of this report was to analyze the redevelopment, or retrofit, potential of three study areas in Hamilton, Ontario: University Plaza, Lime Ridge, and Eastgate Square. Specifically, the report aimed to determine which study area has the greatest potential for successful retrofitting. These study areas are ideal for retrofitting as they are all suburban commercial centres that possess problems typically addressed through retrofits including: large and underutilized parking lots; poor connectivity; and lack of land use diversity.

Method

Determining the retrofit potential of each site was accomplished using Geographic Information Systems (GIS). GIS allowed for a quantitative assessment of various physical criteria of the built environment at the commercial centres and the surrounding area.

The concept of 'urban tissues' was used to categorize lots, buildings, and streets. All lots were categorized into one of three urban tissue types: campus, elastic, or static. Campus tissues are large tracts of land which are developed to contain several buildings on a single property such as hospitals, university campuses, and shopping complexes. They possess the maximum potential for change. Elastic tissues typically contain a single building per lot, are variable in size, and often have higher diversity and turnover in uses. Examples include strip malls and industrial lands. They possess a moderate potential for change. Static tissues are designed for single family homes. They have a rigid network of relatively small and identically sized lots. Static tissues have the least potential for change.

A two-pronged scoring system was used to compare sites. The urban tissue characteristics at each site were used to calculate a Retrofitability Score which is designed to objectively compare sites. A higher score indicates a greater potential for retrofit. The Retrofitability Score was

supplemented by a strengths and weaknesses assessment of each site which examined other aspects of the physical environmental including: street centreline length, intersection density, accessibility, diversity, gross residential density, and parking.

	University Plaza	Lime Ridge Mall	Eastgate Square
Retrofitability Score	3.64	4.27	4.90
Street Centreline Length (m)	15,469	28,463	20,316
Intersection Density (intersections / hectare)	0.36	0.55	0.46
Accessibility (number of residential lots)	834	1,324	1,015
Diversity	0.35	0.33	0.37
Gross Residential Density (dwelling units / hectare)	13.95	11.59	17.70
Parking (percent of developed land)	28%	36%	49%

Table A-1: Summary of findings.

Figure A-