

Major Research Project Reflection Report

MES Planning Program

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Final Submission: September 2, 2014

Report of a Major Project submitted to the Faculty of Environmental Studies in partial fulfillment of the requirements for the degree of Master in Environmental Studies

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Introduction

Characteristics of the built environment have been found to influence the health of the population. Over the last two years of my Planning Program, I have taken several courses and independent studies during which I developed my knowledge of the disciplines of Public Health and Urban Planning. My interest in the subjects is a product of the fact that the population is spending more time being sedentary and as a result, they continue to become unhealthier. The primary area of concern in health is the rapid rise in obesity rates. Obesity rates continue to increase as food is more accessible and lifestyles are changing to exclude physical activity. The built environment is relevant to increases in obesity rates because evidence suggests that sprawling neighbourhoods with low density development have increased auto-dependency and created physically inactive neighbourhoods (Peel Public Health, 2005).

Being overweight or obese leads to other health conditions such as type 2 diabetes, heart disease, osteoarthritis, hypertension and stroke. These health conditions decrease the population's quality of life but they also have economic and social implications. Economically, there are both direct and indirect costs. Direct costs include costs related to hospital care, physician costs and medications. Indirect costs include the costs related to loss of work due to disability for example. Social costs include the negative psychological effects that could result from negative self image or discrimination (Peel Public Health, 2005, p11).

Obesity is not an issue isolated to Public Health because poorly designed, low density, sprawling neighbourhoods have been identified as contributors to physical inactivity, obesity and other chronic disease. The increasingly sedentary lifestyle has been complemented with need to rely on the automobile to travel. Planning is presented with the opportunity to reintegrate utilitarian physical activity by creating communities that are less auto-dependent and meeting the daily needs of the

population in a more compact space. It can be achieved incorporating healthy development characteristics into future developments.

There is also an additional benefit. Healthy communities are complete communities and complete communities are compact and efficient. Developing in this manner is more sustainable for the future.

Planning and Public Health go hand in hand. Both sides benefit from the relationship. Planning creates higher quality and more efficient development while Public Health benefits through the healthier population. As such planning and public health practitioners from the Region of Peel, City of Toronto and the Planning Partnership are working together to develop the Health Background Study Framework. The Health Background Study Framework will cumulatively be a series of tools that can be used to evaluate the health impacts of a planned development or planning policy and to provide guidance on the development of healthier environments.

In the following report, I will outline the origins of the Health Background Study Framework. For my Major Research Project, I worked with Peel Public Health to evaluate one of the tools from their Health Background Study Framework: the Health Assessment Checklist. I will outline my responsibilities as per my project and speak to why I believe that the evaluating the tool is valuable to both the Region of Peel and to myself. In addition, I will discuss what I know about Public Health and the Built Environment from a planning perspective and outline my key takeaways from the process.

Origins

Research into the built environment and public health supports the existence of a relationship between the two disciplines. So much so, that the Region of Peel took notice. The importance of the built environment was highlighted in Peel's *State of the Region's Health* (2005). Along with physical activity and eating habits, the environment (referring to Peel's built environment) was identified as a key

contributing factor to the growth of overweight and obesity amongst the region's residents. The report asserted that Peel's sprawling suburbs had design features that encouraged residents to drive more while discouraging walking and bicycling thereby contributing to the epidemic of obesity (Peel Public Health, 2005, p31). Low density development throughout Peel had led to car dependence with very few commutes amongst the population taking place using the cycling and walking (Peel Public Health, 2005, p31). People that lived in more efficient and higher density neighbourhoods typically walked more, weighed less and were less likely to suffer from conditions such as obesity and consequently other diseases such as diabetes and hypertension (Peel Public Health, p31). The report also stated that walking and cycling activity were influenced by population density, settlement patterns, location of places of work compared to residences, cost and service level of transit, climate, lifestyle choices and the availability of convenient pathways and bike lanes (Peel Public Health, 2005, p31).

This report prompted Peel council to adopt a resolution that directed Peel Public Health to study and make recommendations for planning policies and processes that provided greater opportunities for active living in the region. Peel Public Health responded by identifying the need for an evidence based tool to assess the health impacts of planning policy (Dunn et al, 2009, p6).

In 2009, Peel Public Health, St. Michaels Hospital and McMaster University collaborated on a project that studied built environment characteristics associated with walkability, physical activity and active living. They identified characteristics that would become part of the Peel Healthy Development Index; a tool that could be used to assess the health impacts of new development proposals (Dunn et al, 2009)

The Peel Healthy Development Index project identified seven core elements (characteristics) and numerous quantifiable standards that were associated with built environment walkability and better health outcomes. However, upon consultation with private and public planning practitioners regarding the feasibility and implementation of the index, a number of issues were identified. The Healthy

Development Index did not account for the differences in development goals from municipality to municipality (Dunn et al, 2009, p14). Additionally, the standards within the Index were hampered by existing municipal, region and provincial targets and bylaws (Dunn et al, 2009, p9).

Key stakeholder consultation and ongoing refinement of the built environment elements led to the development of the Health Background Study containing the user guide, the terms of reference and the Health Assessment Checklist (Checklist from here on out). The development of the Health Background Study Framework is a joint initiative between public health officials, planners and consultants from the City of Toronto, the Planning Partnership and the Region of Peel. The Health Background Study Framework documents are "the framework for municipalities to establish a mechanism to integrate considerations of health impacts into the land use development approvals process" (Region of Peel, 2011, Preface, p1). The Checklist is intended to evaluate the health impacts of development applications and land use planning policies at various scales. In conjunction with a detailed user guide and terms of reference, the Checklist is intended to help planners and users evaluate whether the designs of newly proposed development and land use planning policies achieve the minimum standards associated with community health. They are also intended to help foster a discussion between planners and developers on how the applications can be improved to better integrate healthy characteristics. Peel Public Health is targeting the built environment as a factor that could be improved upon in order to bring about changes to walking and cycling habits and improve the health of its residents.

The Major Project

In March of 2014, I began working with Shilpa Mandoda and Aimee Powell of Peel Public Health to field test the most recent version of the Checklist (Feb, 2014). Since 2009, the Checklist had been refined to contain 41 quantifiable standards related to six elements: density, service proximity, land use mix, street connectivity, streetscape characteristics, and parking.

As part of the project, I applied the Checklist to seven locations around the Region of Peel in order to gather information regarding the applicability and usability of the checklist in built environments designed for different land uses. Additionally, I was also responsible for evaluating a policy document or plan associated with the development of each of these locations; be it a site plan, a block plan or a secondary plan. The field visits and evaluation of policy documents would help determine whether the selected sites failed to meet, met or exceeded the quantifiable standards set out in each element of the checklist. The results could then be used as a basis for determining whether or not a study site could be deemed healthy.

My objective was to then compile a report for Peel Public health where I provided comments on the strengths and weaknesses of the checklist and recommendations that spoke to how the checklist can be improved.

I was given autonomy in selecting study sites as long as a variety of built environments designed for different land uses were studied. In order to ensure that we accounted for the differences in development patterns around the region, sites were selected from each of Peel's municipalities. Three sites were selected from the City of Mississauga, two sites were selected from the City of Brampton and two sites were selected from the Town of Caledon. The sites were also studied at different scales. In some cases such as at Heartland Town Centre and the intersection of Tomken Road & Matheson Boulevard East, the selected lands only accommodated one land use. In other instances, the study site accommodated a variety of land uses or only a cross section of a space was analyzed. See chart including study sites below.

Table 1: Study Sites

Municipality	Location	Land Use Type
City of Mississauga	Heartland Town Centre	Mixed Uses
	Port Credit	Mixed Use Residential Commercial
	Tomken Road & Matheson Boulevard East	Employment Land
City of Brampton	Gordon Graydon Senior Public School (170 Rutherford Road North)	Residential Uses Institutional Uses Parks and Open Space
	Bramalea Road and Queen Street East	Residential Uses Parks and Open Space Commercial Mixed Use
Town of Caledon	Caledon East	Residential Uses Institutional Uses Commercial Uses Parks and Open Space
	Palgrave Settlement Area	Residential Uses

During the field visits, I made observations of the built environment conditions within each study site as they pertained to the elements of the checklist. It allowed me to provide Peel Public Health with a snapshot and description of each study site. I completed a checklist for each study site to determine the extent to which each study site incorporated the standards within the checklist. The completed checklist and my observations aided me in determining whether or not a site could be considered healthy.

During the next stage of research, I located a planning document (either a block plan, site plan or secondary plan) that was applicable to the study site. I was responsible for analyzing the plans to identify and record policies that were related to the standards of the checklist. In looking at the policy, I was able to better understand whether or not the policy were in place to ensure the development of healthy built environments. Block plans and site plans for each site were not readily available. Therefore only secondary plans were analyzed for this project.

Field visits and policy analysis was completed between the months of April and May. The report was then drafted, reviewed and further developed throughout June with a final draft submitted at the

beginning of July. The entire process took place under the supervision of Shilpa Mandoda and Aimee Powell. .

The bulk of the report consisted of case studies where I included site descriptions and outlined findings from the application of the checklist to each study site. Within the application results, I also provided judgements based on my observations and the knowledge I had accrued in the MES Planning program. Based on the application process, I additionally provided comments on what I believed to be the strengths and weaknesses of the Checklist based on my experiences while applying it. I also provided recommendations to overcome the identified weaknesses. Finally, I outlined the limitations of this project so that Peel Public Health are aware of the obstacles that may need to be addressed in future projects designed to refine the Checklist.

The findings of the project will be presented to all members of the Peel's Health Background Study Framework team at the end of August.

The Project's Value

The project to evaluate the applicability of the Checklist is valuable for Region of Peel. The Checklist is a tool that they can use to improve the quality of built environments in the region. Using the checklist as a guide during the development process will help combat sprawling development and help planners and developers work together to create the more compact and connected built environments that are associated with populations with higher rates of physical activity and lower rates of obesity and associated conditions. Developing the tool to its highest quality is vital for Peel to be able to reach their goals in developing healthier built environments.

Additionally, the adverse impacts of chronic diseases such as obesity and diabetes also places pressure on the health care system (Region of Peel, 2013, p4). Between 2000/2001, over 1.6 billion dollars was

spent on obesity related hospital costs, drugs and physician services (Basrur, 2004, p4). Reducing these costs will also be beneficial for government.

The project to evaluate the applicability of the Checklist is also valuable for myself. During my time in the Masters in Environmental Studies Planning Program, my Plan of Study (POS) has evolved to centre around the idea that the built environment could be designed to provide people with the opportunities to be more physically active. I understand that lifestyles have changed so that the population is more sedentary leading to adverse impacts on their health. Therefore, there is a need to capitalize on other opportunities for physical activity. Opportunities to be more physically active arise out of utility. We can capitalize on using walking or cycling as a method of travelling to work, travelling to school or running errands. The Public Health Agency of Canada recommends that adults (18-64) should participate in roughly 2.5 hours of physical activity a week to achieve health benefits (Public Health Agency of Canada, 2011). Integrating walking or cycling in our everyday life is a small step towards achieving those goals. Further, ensuring that planners and developers have the tools to ensure the types of built environments that allow people to walk and cycle will also be integral to the uptake of physical activity.

A component of my POS is planning for active transportation. My learning objectives included becoming more familiar with how active transportation can be used to facilitate better health outcomes in the population. Standards within the elements of street connectivity, streetscape characteristics and parking were related to active transportation. The standards ensured that proper integration of active transportation features such as wide sidewalks and cycling lanes were being considered as design tools to ensure healthier communities and thereby healthier outcomes.

My studies in the MES program was built on this relationship. Land use design and policy impacts health outcomes. One of my learning objectives in the component of Public Health and Land Use Planning was to become familiar with the most important aspects of land use planning that could be augmented in an

effort to increase physical activity levels among people in Ontario. The Healthy Development Index project helped guide the development of the Checklist and identified the most integral elements of the built environment that were associated with physical activity, walkability and active living. Further, the elements were augmented by the standards to best foster the development of healthy environments.

Finally, an objective of my final component (Urban and Regional Planning) was to develop a better understanding of the planning practices and policies that help shape environment. Through the policy document evaluation phase, I directly identified policies that were best associated with healthy development at the selected study sites. Unfortunately, I found that many of the policies were not directly related to healthy development but the experience familiarizes me with potential policy obstacles that planners have to face to implement health built environments.

Undertaking this project was beneficial to both Peel Public Health and myself. In the future, a further refined Health Assessment Checklist will work in conjunction with the user guide and terms of reference as tools in the Health Background Study Framework that potentially curb unhealthy development and car dependence in the region (and in the City of Toronto). They will address a identified deficiency in their planning process by participated in creating an evidence based tool used to evaluate the health impacts plans and policy documents. In the process, the resulting checklist will be a key tool in the combating the obesity epidemic and its associated costs.

For myself, the project proved to be valuable experience in planning and public health collaboration process. My studies have taught me that in order to make valuable impacts on people's health and quality of life, it will be vital that planners and public health officials collaborate in the process to ensure that policies are supportive of environments that allow people to be active. We will then be able to capitalize on utilitarian trips as opportunities for physical activity. In addition, I believe that the project allowed me to be more complete planner as it allowed me to address some of my learning objectives in

my areas of interest and apply everything that I have learned in the MES program on a large scale project.

My Knowledge Base

This project aligned with my studies over the last two years in the planning program. As previously mentioned, I have focused my studies on the idea that the built environment could be designed to provide people with the opportunities to be more physically active. Similarly, Peel is attempted to augment future development in the region so that it is characteristic of environments that have healthier residents. They want to create healthier environments that allow meet more of their residents daily needs, better catered to active forms of transport such as walking and cycling and reduce reliance on the automobile.

Prior to enrolling in the planning program, I completed a Bachelors of Science studying Kinesiology. We often studied the negative impacts of being overweight and obese on quality of life and on the health of individuals. My decision to try and integrate the planning discipline with health came after reading *Chief Medical Officer of Health Report: Healthy Weight, Healthy Lives* by Dr. Basrur. The report outlined that in 2003, about 57% of Ontarian men and 42 percent of Ontarian women were overweight or obese (Basrur, 2004, p24). These rates were alarming.

Further research revealed that many researchers believed that sprawling patterns of urban growth have increased our reliance on automobiles. In turn, they've discouraged walking and other physical activity (Kelly-Schwartz et al, 2004, p184). Physical inactivity in combination with poor diets was further contributing to the growing epidemic of obesity and its associated health concerns such as hypertension, diabetes, and heart disease(Kelly-Schwartz et al, 2004, p184).These sentiments were reflected in Peel's *State of the Region's Health* (2005) report.

In their study entitled *Obesity Relationships with Community Design, Physical Activity and Time Spent in Cars*, Lawrence Frank and his associates found that time spent in the car as a passenger or driver was positively associated with obesity and every additional hour spent in a car per day was associated with an additional 6% odds of being obese (Frank, Andresen & Schmid, 2004, p90). It became clearer that there had to be a way to increase physical activity while reducing the need to use your car.

A 2005 report entitled *Urban Form, Physical Activity and Health* prepared for Region of Waterloo Public Health, it was reported that walking was the most commonly reported physical activity behaviour amongst Canadians. In their study, Lawrence Frank and his associates also found that that each kilometre walked per day was associated with a 4.8 % decrease in likelihood of obesity (Frank, Andresen & Schmid, 2004, p90). Yet, people simply did not walk enough to see health benefits.

I continued to read reports that stated that higher sprawl areas typically had residents that were less physically active and suffered from higher rates of obesity. Kelly-Schwartz and her associates reported that in more compact neighbourhoods with smaller block sizes, wide sidewalks, interesting visual environments, mix uses, people would drive less and use public transit. *Urban Form, Physical Activity and Health* also reported that those living in neighbourhoods with higher connectivity between street and mixed land uses had lower risks of being obese (Fisher, 2005, p23)

I began researching neighbourhoods that had higher levels of physical activity. I found that these neighbourhoods were more walkable. The walkability of a neighbourhood is simply a quantitative and qualitative measurement of how inviting or un-inviting an area is to pedestrians (Hess & Farrow, 2010, p1). Did the neighbourhood have characteristics conducive to walking? Hess and Farrow studied walkability in Toronto's high rise neighbourhoods. Though they found that those living in these high rise neighbourhoods were typically living in poorer quality environments and were less affluent, they agreed that their neighbourhoods were good for walking. They stressed the importance of quality walking

environments as a key to the uptake of walking. Hess and Farrow also wrote that built environments that facilitated walking to stores, school and amenities were better places to live promoted healthier lifestyles and showed higher levels of social cohesion.

While reading the *Growth Plan for the Golden Horseshoe* (2006), I encountered the term complete communities in its principles. A Growth Plan principle is to "*build compact, vibrant and complete communities and optimize the use of existing and new infrastructure to support growth in a compact efficient form*".

The Growth Plan defines complete communities as those that:

meet people's needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, and community infrastructure, including affordable housing, schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also provided.

That definition describes environments that contained some characteristics that I had read about such as compact for, mixed uses, and public transit provision.

As part of an independent study, I read numerous reports and journal articles regarding healthy neighbourhood characteristics. I compiled a report where I described each of the characteristics in detail and then evaluated my own neighbourhood for the presence of those characteristics. From the literature, I found that healthy neighbourhoods were high dense, mixed use, and highly connected. I also found that they had access to a variety of healthy food sources, medical services, green spaces and public spaces, a range of community services and amenities, and transit options. Though, the growth plan definition and principle do not explicitly speak to healthy communities, they are reflective of the

findings of my research. Therefore walkable communities are also complete communities and healthier communities

The most comprehensive text I read during my studies was entitled *The Built Environment and Public Health* (2012) by Russell Lopez. In the text, he summarizes and describes the numerous characteristics that typically can be found in healthy environments while speaking to their impact on both physical and mental health. Among other characteristics, he explained that highly connected street patterns, high densities, mixed uses, green spaces, urban design features that facilitate walking and cycling, and even street trees were characteristic of environments that facilitated physical activity and social interaction.

My studies in the literature clearly identified the relationships between public health and the built environment. As public health and planning departments often operated independent of each other, the findings suggested that there are opportunities to impact both quality of life and quality of environments through collaboration and greater consideration of health in the development of planning policies. The Health Background Study Framework is a direct example of the two disciplines coming together to achieve the mutual goal of creating better quality healthy environments.

Key Takeaways

After completing this project, I believe that I have come away with valuable insight into healthy built environments but have also come away with some concerns regarding the checklist.

Prior to my field visits, I had never realized the impact of parking lots on development. My independent study work into healthy neighbourhood characteristics literature did not reveal it to be deterrent to walkability or healthy building. However, upon conducting field visits to Heartland Town Centre and comparing parking arrangements to those at Port Credit, it became easier to see that parking has a very large impact on healthy built environments. Heartland Town Centre accommodates parking using

surface lots while Port Credit accommodated parking in a variety of forms including on-street parking, small surface lots, and underground and over ground structures. As a result, Port Credit was a much more efficiently used space. Heartland Town Centre's surface parking lots were very large and underutilized. They were flat but took long amounts of time to cross. The lack of spaces dedicated for pedestrians within made interaction between vehicular and pedestrian traffic frequent and the lack of interesting design made the space feel barren and bleak. In Port Credit parking lots on the other hand, you were closer to destinations and navigating the space was easier. The field visits were valuable in providing insight into how the design of the environment can be impact the usability of a space. I believe I would not have been able to gather by simply looking at plan or policy document.

Prior to beginning work on the project, I believed that there would be issues regarding the comprehensiveness of Peel's Checklist. The Health Background Study Framework only identified six main characteristics or elements of healthy built environments. My work during independent studies along with reading texts such as *The Built Environment and Public Health* had introduced me to a greater number of elements of healthy environments included mixed uses, high densities, mixed housing types, access to public transit, access to green spaces and public spaces, access to medical services, access to healthy foods, highly connected streets, and quality public realms. As I worked with the checklist, I began to notice that aside from the access to healthy foods, all the elements were present. Some of my identified elements were refined and included as standards in elements. Additionally, prior to using the checklist, my research had failed to reach the level of identifying quantifiable standards for each element that best achieved positive health. These finer detailed standards taught me that it is not merely the absence or presence of a feature that will determine its success as a healthy environment characteristic. For example, broadly, the presence of a sidewalk is a necessity to provide users with a space to walk. More specifically I now understand that a narrow side walk, side walk that does not lead to a useful space or a side walk that is inaccessible holds little value to a user. Similarly, the presence of

a variety of services in a community is a positive quality but it loses its value when they are located so far from home that it forces users to have to drive to access them. The Healthy Background Study Framework containing the user guide, terms of reference and the checklist is one of the most comprehensive healthy development documents I have ever encountered. I believe its comprehensiveness stems from the Peel Healthy Development Index that developed through a thorough literature review regarding built environment, walkability and active living.

Though I believe that the Checklist is a highly comprehensive document, I did have concerns regarding its relevancy to business employment areas. The bulk of healthy environment literature shows preference towards mixed use environments that incorporate spaces and services that residents need for utilitarian purposes. Upon analyzing the strengths and weaknesses of the Health Assessment Checklist, I noticed that many of the standards within did not apply to employment areas. Further, business employment areas failed to meet standards that did apply. I have not encountered literature or guidelines for developing healthy business employment. Business employment areas often contain uses that are deemed to be incompatible with others. However, many people spend a large portion of their days in these spaces. So it raises the question: how can you make employment areas more walkable? As it stands, they are auto-oriented with little green space, on large block sizes and are typically aesthetically unappealing. As such, I suggested that there are opportunities to target business employment areas to provide more opportunities to be physically active. This could mean anything from locating parks nearby, providing a more aesthetically pleasing streetscape that encourages employees to walk during their lunch breaks or potentially increasing permitted uses to drive activity in the area.

An additional concern that arose after the completion of the project is with regard to creating homogenous environments. The checklist is designed to be a tool to encourage healthy development in the Region of Peel and City of Toronto. While the City of Toronto is thoroughly developed, land within

the City of Brampton and Town of Caledon are still available for development. The case studies reveal that Peel does contain communities that are already built out, contain healthy environment characteristics and deemed to be healthy. If communities such as Port Credit or Caledon East as used as models for future development and we abide by the standards of the checklist too strictly, we run the risk of development homogenized and monotonous communities that do not reflect the characteristics of Peel different municipalities. I suggested the need for an understanding that the checklist is to be used flexibly. Developers and Planners will need to collaborate in order to find the balance between healthy development, being mindful of the unique characteristics of the municipality and developer needs.

My final concern is regarding the Checklist's largest barrier to success. There is no legislation that ensures that developers include recommended healthy environmental elements a mandatory requirement for the approval of the development application. Though municipalities can *demand* the completion of the Checklist as part of the approvals process, it is intended to be a means of creating a discussion between developers and planners on how to improve the quality of the development by including healthy elements. The uptake and inclusion of any recommendations standards or elements are voluntary.

Next Steps

In order for the Health Assessment Checklist to be successful, a number of steps have to take place. The tool is not yet perfect. Some refinement is still necessary within its standards. The checklist performs well in areas where that are intended for mixed uses but does not cater well to areas of dedicated uses such as business employment areas or commercial areas as many of the standards within the checklist would be not be permitted due to the zoning restrictions.

Further testing is also needed to determine how the checklist fares when applied to smaller scaled development sites and tested with block plans and site plans. For example, the development of a singular structure was not studied. In this project, very large blocks or communities were studied. In addition, only secondary plan policy could be reviewed in relation to the checklist standards. These were two of the limitations of the preceding project that must be addressed in order to fully understand the usability and applicability of the checklist.

I also believe it will be worthwhile to continue research to identify the standards that are more influential to healthy development. The standards cannot be treated equally as some are undoubtedly more relevant to increasing walkability than others. For example, standard 9 addresses the distance to a park and natural space. It becomes irrelevant if there are no safe and connected pathways or routes to access the park as reflected in standard 23. Therefore, I would interpret standard 23 as being far more pertinent to developing a healthy environment than standard 9. It will be vital to learn which standards hold more weight and so that they can be prioritized.

Conclusion

Participating in the analysis of Peel's Health Assessment Checklist was a very valuable experience. Through the process, I was able to contribute to the development of a vital tool. The Health Assessment Checklist is unique in North America as there are currently no procedures in place that *demand* the completion of a health-based evaluation of planning and development approvals process. A number of cities use Health Impact Assessments to assess the impact of large-scale development projects on key determinants of health such as income/social status; employment/work conditions; education and even the natural environments. Health Impact assessments are rarely used to evaluate small scale privately initiated development proposals. The Health Assessment Checklist will be the first of its kind.

The application of the Health Assessment Checklist allowed me to fulfill learning objectives in each of my main components. In the component of active transportation planning, I was able to become familiar with how active transportation can be used to facilitate better outcomes for the population as the checklist included standards that ensured the proper provisioning of active transportation characteristics. For the component of Land Use Planning and Public Health, the checklist encompasses the process of augmenting how land is being used and designed in order to increase activity levels within the population. Finally, an objective of my urban and regional planning component was to develop a better understanding of the planning practices and policies that help shape environment. The planning policy analysis phase of the project allowed me to immerse myself searching for policies that directly associated with each standard and health. In many cases, I was unable to find policies that were policy that explicitly included health but I was able to find policies that were somewhat associated.

Participating in this project allowed me to apply the skills and knowledge that I acquired in the planning program for an organization that shares the same interests. Over the last 2 years, I have become increasingly passionate about developing the quality environments that allow residents the opportunity to exercise and improve on their health while incorporating physical activity into their everyday lives. If physical activity is done for utilitarian purposes, there may be a greater uptake of it. As the research suggests however in order to increase the number of people participating in utilitarian physical activity; a well designed built environment must be available that supports the residents. Unlike the City of Toronto, Peel is still growing. As its municipalities continue to expand, the checklist will be an integral tool in ensuring that new residents in the region will have access to the healthy built environment features that allow them to be active and meet their daily needs.

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