

Improving accessibility to transit: An examination of the public transportation  
system for older adults in Winnipeg, Manitoba

by

Aaron Leckie

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Department of City Planning  
Faculty of Architecture  
Winnipeg

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## Abstract

An aging population will be a defining characteristic of Canadian demographics for the next 30 years. The convenience, reliability, and flexibility of public transportation systems to meet new and changing demands will be an important issue as Canadian cities age. Blending approaches from urban planning, transportation planning, and gerontology, the researcher investigated public transportation services for older adults in Winnipeg, Manitoba. The focus of this research was to understand how the City of Winnipeg prioritizes and funds transit improvements, the barriers that older adults encounter when using transit, and to look at existing challenges and opportunities to enhance the public transit system. Multiple methods were used in this study. The researcher conducted interviews with urban professionals working for the City of Winnipeg, hosted a focus group with older adult users of public transportation, and collected the demographic data of focus group participants through an exit survey. This research finds that older adults in Winnipeg encounter several barriers to transit which largely fit under the general themes of access to bus stops, access to information, and access to destinations. Recommendations and further areas of investigation are provided.

**Keywords:** age-friendly; universal design; travel chain approach; barrier-free design; life-course perspective; winter cities

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## **CHAPTER 1 INTRODUCTION**

Cities are aging. The population growth of older adults in urban areas continues to outpace other age cohorts (CMHC, 2011). Municipal services need to provide greater flexibility in order to accommodate the needs of citizens. Public transportation service in the City of Winnipeg has grown and changed over the years as new technologies and service demands evolved across North America. Winnipeg Transit has recognized the changing demographics and is working to better accommodate older adults as is illustrated by a full fleet of low-floor accessible buses. How did the City of Winnipeg prioritize, fund, and implement this change? Did older adults in Winnipeg play a role in shaping this change? How do older adults gauge the changes that have been made to transit service? Are there other barriers that need to be removed to promote better access to transit? These are the guiding questions for this research.

With a growing number of older adults, especially those living well into their 80s, public transportation systems will have to become more responsive to the needs of older adults. Transportation planners need to place increasing focus on the mobility and accessibility needs of older adults. Older adults are not a uniform group. Proper and thoughtful planning is needed to ensure that the specific needs of older adults are incorporated into the design and implementation of public transportation. Researchers have identified some of the key barriers to transit for older adults under the broad categories of the built environment, buses, other people, and access to information (Michael et al., 2006). Few studies have taken into account the full travel chain of older adults or the influence of winter weather conditions on travel

patterns. This study proposes to fill that gap in order to identify barriers that may have been overlooked or understudied.

The goal of this research is not to identify a universal approach to transit planning for older adults that works for every municipality, but rather, to convey the Winnipeg experience and highlight certain areas of practice that may have applicability to other jurisdictions in Canada and abroad. The results of this practicum can be used for further study by either a researcher or the City of Winnipeg to determine if these findings are still valid in a larger sample size. Conducting further research in this area would provide the City of Winnipeg with a more robust understanding of the barriers encountered by older adults. When priorities are set through the capital and operating budgetary process, the needs of older adults using public transportation will be better understood. Older adults should have a role to play in the consultation, design, prioritization, development, and retrofit of transit which affects them directly. Making transit more accessible for older adults improves transit for all users.

## 1.1. Problem statement

The literature review revealed that public transportation studies with a focus on older adults is still a relatively new subset research field stemming from a combination of gerontology, transportation planning, and urban planning. Many of the recent studies examined indicate significant gaps in the literature – especially in the realm of studies that bring together directed research surrounding those involved in transportation planning decisions and older adults as users of public transportation.

This research identified the major barriers and any significant breaks encountered in the travel chain for older adults in Winnipeg. The findings resulted in several recommendations and the need for a larger study based on how the City of Winnipeg may allocate resources to enhance the transportation system thereby making it more responsive to the level of service needs of older adults.

This practicum was developed to add to the knowledge of barriers encountered by older adults and provide a Winnipeg context so that decision-makers can evaluate the proposals to mitigate concerns and undertake more directed study in specific areas to improve public transit in Winnipeg. This research is needed so that future improvements to public transit can be properly vetted through understanding the critical components that make travel difficult for older adults.

## 1.2. Site selection

In order to answer the research questions the researcher focused on major urban centres with well-developed publically operated fixed-route transportation systems. Calgary, Edmonton, Saskatoon, Regina, and Winnipeg were identified as potential candidate municipalities. In the end the focus of this research was solely based in Winnipeg. Winnipeg was selected based on the researcher's experience within the city as well as the network of contacts and support which aided in the development of this practicum.

Although some aspects of Winnipeg are representative of changes to the built environment and how public transportation is provided throughout Canada, each city is unique insofar as

how public transportation, shifting market demand, and changing societal values have been managed. As is further discussed in the literature review, municipalities across Canada have approached aging populations in very different ways. There are some high-level recommendations that may be applicable to other municipalities in Canada. If there is one commonality, it is that all Canadian cities are aging to one degree or another. Many municipalities will experience similar challenges.

### 1.3. Research questions

- 1) At the municipal level, what planning methods are employed to gauge how public transportation is provided for older adults?
  - a) How are results prioritized and funded?
  - b) How are identified improvements implemented and subsequently reviewed and evaluated?
- 2) What are the specific barriers that deter older adults from using public transportation?
  - a) How accessible is the current public transportation system for older adults?
  - b) What do older adults identify as the 'breaks' in the travel chain when linking origins with destinations?
  - c) What features of the public transportation system actually promote use and are identified as an advantage?

- 3) What opportunities exist to improve accessibility of public transportation systems for older adults?
  - a) How can origins and destinations be better linked using public transportation?
  - b) What recommendations can be made for further study into how the city can implement long-term investment or re-prioritization?

#### 1.4. Research significance

Although many older adults do not use public transportation this research is still necessary and significant. This practicum is primarily designed for those that have never had a choice or, because of functional decline, no longer have the choice to select their main mode of transportation and have turned to public transportation as a way to fill their daily transportation needs. Public transportation, as it exists today, is viewed as unresponsive to the needs of older adults – especially to those with no prior experience to using public transportation that may find themselves having to do so to fill their own transportation gap. If improvements are not made to simplify the use for older adults and remove barriers to transit it may lead to “depression, reduced out of home activities, [resulting] in increased social isolation, [and] reduced self-esteem” (Broome, 2010, p. 33). This research is directly related to ensuring a high quality of life for older adults.

The proposed research will contribute extensively to an understanding of the relationship between older adults and the built environment. There has been a call to study such a relationship and gain insights into the changing mobility behaviour of older adults to guide



future design of transportation routes and services (Rosenbloom, 2004). This research will lead to a better understanding of what patterns of development facilitate access to transportation. The City of Winnipeg can use these results to further study the impact an aging society will have on transportation and land use. Barriers identified in these areas can be mitigated and corrected and may help many older adults that wish to age-in-place avoid institutionalization.

The researcher will submit a brief summary of findings to the City of Winnipeg. The purpose of the document is to outline the barriers to public transportation for older adults, and to make suggestions of further research areas so that urban professionals can further study and consider prioritizing certain upgrades to enhance services to make public transportation more inclusive for older adults.

## 1.5. Ethics & methods

This research has been approved by the Joint Research Ethics Board (JREB). A copy of the ethics approval is attached as Appendix A.

Informed consent was given by all participants, in writing, prior to the commencement of any of the research phases. Participants were made aware that they could withdraw from the study at any time. A rigorous confidentiality process was following to protect anonymity wherever possible.

The directed research methods of this project are semi-structured interviews, a focus group, and an exit survey. The semi-structured interviews involved urban professionals working for the City of Winnipeg. The purpose of these interviews was to look at the city's commitment to

promote age-friendly initiatives and the level of priority placed on public transit improvements for older adults.

The researcher conducted a focus group and exit survey with older adults. Participants in the focus group were engaged in a number of exercises typical of focus groups that apply the Nominal Group Technique. For this study, these methods included individually writing down their responses to a question list, sharing their responses to the questions with the group, identifying barriers to public transit, developing a number of themes, ranking these themes based on importance, and finally, completing an exit survey to record demographic information.

## 1.6. Limitations and assumptions

The researcher has identified several limitations and assumptions surrounding this practicum. The limitations consist of the physical boundaries of this research, the relationship between transit and land use, the functional capacity of older adults, the purposive sampling technique used, and the sample size. The assumptions consist of the barriers that older adults perceive and experience when using public transportation, the methods in the design of the focus group questionnaire, and the age indicator for research participation.

### 1.6.1 Limitations

This research was contained within the boundaries of the City of Winnipeg. Regional transit was not considered. It is important to recognize that there is an ongoing effort to design and eventually implement a regional public transportation system in the capital region. The future

provision of regional public transit is largely governed through the Partnership of the Manitoba Capital Region (PMCR). In 2014 the PMCR adopted a Transportation Master Plan for the region. Goals and strategies have been identified but are almost exclusively designed around the private vehicle, goods movement, and rail. The idea of implementing inter-municipal public transportation is still a new one in the Winnipeg area. The adopted Transportation Master Plan states that it is “difficult to provide transit service in a cost effective manner” (Transportation Master Plan, 2014, p. 46) outside of the City of Winnipeg due in part to the low density. Regional transit opportunities may exist in the future.

A large portion of this research assesses the travel patterns of older adults through the Travel Chain Approach. A small component of this research explores the relationship between public transportation and land use. Many of the historical factors that led to modern public transportation and land use practices were not explored. This practicum does not focus on a historical account of the Winnipeg experience. This research intentionally avoids the history of land use zoning and policies that had a role in shaping the urban form of Winnipeg. The response to generally accepted public transportation and land use policies are theories and practices that lend to the idea of civic re-engagement by looking at new ways to organize community (e.g. new urbanism, form based codes, complete streets, etc.). However, these as well played a limited role in this research. The exception to this is the Life-Course Perspective. The theory is built on how older adults can and do make decisions on how to utilize public transportation based on past experience and therefore is one of the guiding approaches of this research. Epistemological approaches are discussed in Chapter 4.

A pre-screening criteria and purposive sample technique was developed and applied to potential focus group participants. A copy of the criteria is included in Section 4.3 as is the justification for selecting the criteria. The sampling criteria may have inadvertently eliminated potential participants that have experienced severe functional decline. This may have reduced the range of responses to some of the focus group questions, discussion, and exit survey to a small group of older adults that share similar traits. High functioning older adults and those that have gone through a functional decline experience barriers differently. The results of this study cannot be extrapolated to explain a Winnipeg-wide public transit experience for older adults.

Older adults are not a homogenous group and the researcher, for the purpose of this study, has identified older adults by their age rather than functional capacity. Age was selected as a primary metric rather than functional capacity because age allows the researcher to study a more definable group. As well, a majority of studies dealing with public transportation and older adults have used the age of 65 as a benchmark. This eases the comparison in results of the findings of this research with the findings of other projects.

Although the onset of functional decline can happen at any age some researchers have used the age of 65 to determine when enough older adults are experiencing one or more physical functional declines that could provide a well-rounded study to project how future functional decline may affect the ability to successfully use current public transportation systems. Studies have shown that “nearly one-quarter of all individuals aged 65 and over have at least one functional limitation” (Burr & Mutchler, 2007, p. 86). People will continue to age in different ways. The range of capabilities is so great that some older adults may never experience a

physical or cognitive change while others may have many compounding types of decline. These functional declines are not just related to the individual, but the availability of treatment, existing support systems, sense of community and belonging, the urban/rural divide, etc. The focus group comprised of older adults with varying degrees of physical ability. The focus group may help those that have experienced less decline understand some of the difficulties that potential future decline may bring to their use of public transportation and quality of life.

The sample size is too small to identify any overarching representative traits. The sample size and group characteristics are described in detail in Section 5.1. It is not the intent of the researcher to make generalizations about older adults in Winnipeg. Researchers and professionals that intend to utilize this research should be cognizant that the experiences of a more representative group of older adults may differ from these findings.

### 1.6.2 Assumptions

The researcher acknowledges that an assumption lies within the research questions and permeates several areas of this study. The research questions are posed in a way that assumes that public transit in Winnipeg does not serve all the needs of older adults and that something can and should be done to enhance the system and make it more accessible for older adults. The researcher was confident that barriers would emerge from both from the interviews and focus groups as has been demonstrated in key literature in other jurisdictions. Interview and focus group participants spoke about many barriers to public transit. The researcher may have had a bias as questions may have been posed to participants causing them to focus on ways public transportation is dysfunctional. There may be facilitators and positive aspects of transit

that also need in-depth exploration. Positive aspects of public transit use for older adults were highlighted but were not the focus of this research.

The researcher developed and distributed a questionnaire to focus group participants. The purpose of the questionnaire was to help participants recall the various aspects of trip planning, accessing the bus, and completing the trip with an emphasis on the potential barriers that older adults may have encountered in various stages of their individual travel chain. The questionnaire was developed to guide and provide structure to the discussion. In the development of the questionnaire, the researcher's own understanding of transit in Winnipeg, predisposition on what older adults may encounter as barriers with transit, and the influence of findings from other literature had an impact on the development of the questionnaire. To help mitigate the researcher's bias, participants were encouraged the sharing of personal stories and experiences with transit. Items that came up that were not contemplated in the questionnaire (as an example, road work and temporary closures of sidewalks for development) were acknowledged and brought into the discussion.

## 1.7. Chapter outline

This practicum contains 7 chapters including the introduction. The chapters are organized in a logical manner to demonstrate progression on the research from topic selection, to literature review, methods, research, discussion, and conclusion.

Chapter 2 contains the bulk of the literature review utilized throughout this practicum. Key terms are defined, and major comparable studies are discussed. This chapter also contains

a review of municipal aging strategies and a discussion on barriers that older adults encounter when using public transportation. Chapter 3 sets the Winnipeg Context and explores demographic trends. Chapter 4 details the methods used to conduct this study. The primary methods are semi-structured interviews, and a focus group supplemented by an exit survey. Sampling, preparation, and the process of conducting each research phase is discussed. Chapter 5 contains a detailed analysis of the data from all research phases. The data is organized into several themes and categories and referenced back to the research questions. Chapter 6 builds on the elements of Chapter 5 and analyzes how older adults access transportation and compares the results of this practicum back to the body of relevant literature. Areas where this study deviates from findings in other literature are explored and explained. Chapter 7 concludes the research and makes some recommendations for further investigation.

## **CHAPTER 2      LITERATURE REVIEW**

The following literature review consists of an examination of areas of research pertinent to this practicum. The literature is introduced by highlighting some of the external forces that guide recent studies, key terms are defined, theories are explored, governmental policies and funding on aging are investigated at every level of government, and barriers to utilizing public transportation are explored. The section concludes by finding that although there are some approaches developed around public transportation for older adults there remains gaps in funding models and municipal implementation. This translates to some shared and common challenges for older adults when using public transportation. Given this, many municipalities are working towards a more comprehensive solution by adopting and promoting aging strategies and ensuring appropriate resources are in place.

### **2.1. Literature framework**

An aging population is one of the defining characteristics of Canadian population statistics. The cohorts of baby boomers moving through the population pyramid started to retire in 2011, and the number of Canadians over the age of 65 is expected to surge dramatically. By 2036 it is estimated that older adults will comprise roughly one quarter of Canada's population – representing a rate of increase eight times greater than the number of people under the age of 65 (CMHC, 2011). Some smaller municipalities that have a stable or unchanging growth rate are already experiencing this shift. This substantial increase of older



adults in Canadian cities will redefine the image, organization, and composition of the city. The service delivery of public transportation to older adults will be of the utmost importance.

Older adults are a diverse population cohort. Socioeconomic, environmental, and health status between groups of older adults are strongly related to their knowledge of and experience with public transportation. Physical and cognitive decline is unique to every individual. These declines continually “establish [and re-establish] conditions of independence” (Burr & Mutchler, 2007, p. 86). Public transportation comprises of an important component of transportation options for older adults with limited mobility when well-designed services exist (Hanson & Elmet, 2006; Michael et al., 2006). Some older adults have experienced a functional decline that has caused them to revisit their selected mode of transportation. Understanding the specific needs of older adults is one method to improve public transportation for all citizens (Broome et al., 2010).

## 2.2. Defining key terms

### *Accessibility*

The term accessibility is used in a range of disciplines. Transportation planners generally focus on mobility, land use planners focus on spatial access and the distance between objects, while social planners focus on accessibility options available to certain groups for certain services (Victoria Transport Policy Institute, 2016). In public transportation planning, accessibility is generally defined as an individual’s “ability to reach desired good, services, activities, and destinations”

(Victoria Transport Policy Institute, 2016, p. 49). However, a standard definition of accessibility does not work well for this research. As a portion of this study takes an in-depth look at the travel chain of older adults a definition of accessibility that encompasses all aspects of movement is necessary. For this reason the following definition was selected for this research.

Accessibility consists of three related components: the personal (in this case, the functional capacity and mobility of the individual); the environmental (in this case, the real and perceived barriers to public transportation for older adults); and a juxtaposition of the personal and environmental components (in this case, describing the relationship between the built environment, access to public transportation systems, and the mobility related issues of older adults) (Inwarsson & Stahl, 2003, p. 61-62).

### *Functional Decline*

Physical or cognitive loss or decrement in the ability to complete tasks. Functional decline can be cumulative. It becomes more difficult for individuals that have experienced functional decline to complete their daily routine.

### *Life-Course Perspective*

A theory based on the assumption that early events in the life of an individual can have an influence on later decisions. Heavily based on historical and socioeconomic context in which they have lived (Chappell, McDonald, & Stones, 2008).

### *Nominal Group Technique*

A research method that facilitates the generation of ideas through group discussions and utilizes a democratic voting system to rank and order the priority of problems or solutions (Delbecq & Van de Ven, 1971).

### *Older Adults*

For the purpose of this research, older adults are defined as anyone of or over the age of 65. This is the standard that is used in a majority of public transportation studies involving older adults.

### *Travel Chain Approach*

“All elements that make up a journey, from the starting point to destination – including the pedestrian access, the vehicles, and the transfer points” (WHO, 2011, p. 179).

## 2.3. Older adults, mobility, and functional decline

For this practicum older adults will be considered any individual over the age of 65. This is the general consensus definition in the literature for studies involving older adults (Ramsay, 2008; Turcotte & Schellenberg, 2006). Some studies divide older adults into smaller categories: the young-old (65-74); the middle-old (75-84); and the old-old (85+) (Zizza, Ellison, & Wernette, 2009; Burr & Mutchler, 2007; Forman et al., 1992). Older adults are not a homogenous group; there are many characteristics that set older adults apart from the rest of the population. There is a wide variation within those categorized as older adults. The level of mobility plays an

important role in access to transportation options. Many aspects contribute to the variance seen in older adult groups: level of income; type and location of housing; past decisions regarding transportation; and cultural heritage are just a few. Studies show that as age increased, so did the number of older adults not traveling and many of them face difficult mobility problems (Ramsay, 2008; Alsnih & Hensher, 2003). Studies have shown that older adults feel better connected to their city and are more likely to take public transportation if adequate public transportation service exists (APTA, 2005).

While economic, social, environmental, health influences, and level of mobility play an important role in the ability of older adults to access transit, coping with an impairment that leads to either physical or cognitive decline has a cumulative effect. Studies have shown that about a quarter of older adults over the age of 65 are dealing with at least one type of functional decline (Burr & Mutchler, 2007). A combination of social status, access to health care, disposable income, demographic, community and neighbourhood services, accessibility, gender, and a complete array of other variables determines how an older adult is able to cope with a significant change in their life (Avlund, Damsgaard, & Osler, 2004; Bentley et al., 2013; Palgi, Shrira & Zaslavsky, 2015; Cramm et al., 2013).

Even so, studies that detail functional decline in older adults are still relatively new. It can be difficult for researchers to follow-up with participants because of the funding structures of long-term studies, death, or non-participation for other reasons (Avlund, Damsgaard, & Osler, 2004). Longitudinal studies have provided a more detailed understanding of how functional decline affects transportation use or choices. Still, greater research is needed to fully

understand how public transportation can be more responsive to older adults that have experienced a functional decline.

## 2.4. Accessibility

One of the main themes of this research is to better understand how access to public transportation can be improved. The researcher has selected a definition for accessibility described in Section 2.2 that accounts for the personal and environmental aspects of mobility.

Older adults consider accessibility directly linked to quality of life and safety (Ramsay, 2008). For older adults both “accessibility of origin and accessibility of destinations” (Grant et al., 2010, p. 308) are important considerations in the travel chain for getting around. All aspects of the trip are important to consider when using the Travel Chain Approach including but not limited to “safety, personal security, flexibility [of the system], reliability [of the system], and comfort” (Rosenbloom, 2009, p. 34). Although many studies have indicated that better facilitation of a single aspect of transportation can improve accessibility of buses, others have found that this has had no real impact on ridership or quality of the ride for older adults (Paez et al., 2007). Understanding the unique mobility and access requirements of older adults will allow governments and organizations to direct resources and facilitate healthy and success aging.

## 2.5. Aging strategies and government resources

One of the key objectives of this practicum is to review municipal aspects of public transportation and determine if, how, and when resources should be allocated or reallocated to

better serve the transportation needs of older adults. However, although many municipalities raise significant funds through property taxation and development levies, a major source of funding projects is through provincial and federal grants and transfers. It is this framework that requires closer examination to determine resource capabilities across jurisdictions and the relationship between funding capabilities and public transit improvements for older adults. There are multiple approaches to funding at the provincial level. The individual contexts in which these funding models are applied are too varied to draw significant comparisons; it is however worth noting that differing arrangements do exist.

Even in a comparatively decentralized government structure like Canada, the federal government retains “fiscal control over financial resources in terms of revenue collection and allocation in order to further national interests” (Mercado, et al., 2007, p. 4) and although there is certainly an awareness of dependency on both sides, the general framework provides opportunities for collaboration. In many cases a major partner in municipal public transportation improvements is Transport Canada. Transport Canada provides cost-sharing agreements, federal gas tax fund allocation, and partnerships between federal, provincial, and municipal levels of government. Projects in Canada implemented through multi-levels of government make a more efficient use of funds when compared to other industrialized nations (Mercado, et al, 2007). As well, variation in when resources are allocated, and flexibility in funding models to fit specific municipal projects ensures support through to completion of the project.

### 2.5.1 International and national policy – Is there an aging strategy?

Canada's federal policy regarding funding of public transportation projects through Transport Canada has evolved over decades as a result of internal and external factors. In recent years, federal transportation policy has been shaped by a combination of political directives but also, Canada's presence at the international stage. One such example is the International Transport Forum (ITF). As of 2015, the ITF composes of federal transportation ministers from 54 member states as well as academics and other stakeholders with the goal as acting as an international think tank on transportation issues. One of the key focus areas of the ITF in recent years is on accessibility to public transportation for older adults. There has been extensive reporting proposing recommendations for countries like Canada to be able to better anticipate the needs of older adults (Mercado et al., 2010). Canada's involvement at the federal level with the ITF helps to shape and broaden transportation accessibility related projects for which funding can be made available.

In a study conducted by Mercado and colleagues (2007) comparing and contrasting transportation policies between six industrialized and aging nations, the researchers found that although some countries have a national aging strategy and build national transport policies in the context of aging societies (most notably Japan and the Netherlands) the implementation of such a system is somewhat lacking in certain development areas. There is a coordinated approach between Transport Canada and the provinces when it comes to infrastructure improvements. However, there is less of a focus on infrastructure improvements and public transportation projects related to aging. Providing suitable and accessible public transportation

for older adults falls broadly under the category of Transportation and the Environment. The Canadian transportation system is highly efficient and operates on a “schedule economy” (Mercado et al., 2007, p. 5). Balancing this with the needs with compact development that promotes a healthy public transportation system is a challenge. As well, the focus on transportation in the strictest definition means that projects connected to providing healthy living environments, which have a huge impact on older adults, sometimes do not receive consideration or funding (Sallis et al., 2009). Although Transport Canada is the national transportation establishment many of the components of providing public transportation, with the exception of funding partnerships, is left to the provinces. The decentralized approach to government engrained in Canada ensures that urban planning and infrastructure provision are essentially provincial and municipal responsibilities.

### 2.5.2 Provincial involvement in public transportation

Public transit evaluation measures for older adults have been prominent in many provinces in recent years. Many provincial strategies have taken the general Transport Canada direction and applied policy to frame and address transportation issues that impact older adults. Each province has taken a different approach. Mercado and colleagues (2010) looked specifically at the example of Ontario and found that significant progress has been made and Ontario, at least, has taken a very proactive approach. Mercado and colleagues (2010) go on to indicate that provincial policy in providing public transportation accessibility for older adults still focuses too much on physical ability and does not adequately recognize the exponential



increase in range of abilities as older adults age. Further studies in British Columbia, Alberta, and Quebec confirm this and add that many provincial programs suffer from implementation and poor coordination with municipal governments (Federation of Canadian Municipalities, 2013).

Adoption of new paradigms based on research and new understanding of service levels, aging, transportation, and urban design is also a challenge (Hatzopoulou & Miller, 2009). There is limited appetite to revise and refine current models, plans, and strategic goals to better evaluate public transportation options for older adults. Decision-makers that set policy and access or disperse funding to lower levels of government may not always have the appropriate data readily available. Service quality measures in most provinces are substandard when looking at regional public transportation (Hatzopoulou & Miller, 2009). The lack of a systematic and common strategic direction at the provincial level in almost every province creates even more variability in approaches and implementation at the municipal level.

### 2.5.3 The role of municipalities in providing accessible public transportation service

Although certain lobbyist groups like the Federation of Canadian Municipalities advocate for municipal issues at the federal level, the relationship between the federal government and municipalities is limited (Boadway & Shah, 2009). Municipalities are the creation of provincial governments and Canada has one of the most decentralized forms of government in the world. In some cases though, the relationship is changing. Municipalities are gaining greater recognition and decision-making ability with the provinces. The recognition

has started with provincial identification of the unique identity of major municipalities and metropolitan areas through city or regional charters.

Public engagement and participatory planning play an important role in the development of municipal action plans to address age-related concerns. These plans usually expand well beyond transportation and address a host of service provisions from resource libraries to economic security issues. Collaborative approaches play a major role in setting policy direction. Many municipalities work within a greater network of municipalities, regions, states, and countries through the WHO global network of Age Friendly cities (WHO). The network continues to expand and add new voices to the conversation and provide opportunities for learning and sharing.

#### 2.5.4 Federal, provincial, and municipal focus on aging and the impact thus far

Canada has begun to anticipate the impact that an aging population will have on how resources are directed and programs are administered (FCM, 2013). All levels of government are concerned with adopting a viable alternative to private vehicle use. Specifically for older adults, the focus seems to be generally on public transportation enhancement (although not yet defined at the federal level). The lack of clarity and setting of goals through clear principles and implementation has hindered the ability for a coordinated approach which the exception of funding models. Beyond funding, in every province the role of providing public transportation enhancements for older adults has been delegated to municipalities. In recent years many larger municipalities have been successful in providing a measured improvement of services for

older adults. Although not a homogenous group by any means, some municipalities, specifically Ottawa and Calgary, have found a balance that works in their local context. Setting up advisory committees, engaging with older adults on a number of platforms, applying sound planning practices bridging various municipal departments, all culminating in a list of improvement, and providing suitable evaluation tools has made for a success story. Even so, an aging population will continue to redefine how municipalities react and how successful they are at providing suitable transportation for older adults. Many municipalities need to expand beyond the strict definition of infrastructure improvement and take a more holistic approach in defining levels of user accessibility to public bus transportation.

## 2.6. Accessibility barriers to public transit

The built environment has more of an effect on mobility and accessibility to transit than any other factor (Ramsay, 2008). The level of access to transit is determined by how an individual can physically access transit, consult information in various aspects of trip planning, and if the trip can be successfully completed. This section includes details on the findings of comparable literature on the barriers encountered by older adults when accessing public transit. These barriers are organized into several topic areas summarized in Table 1 on the next page.

**Table 1 - Barriers to public transit**

Barriers to public transit (literature review)				
<b>Built environment barriers</b>	<b>Physical access barriers</b>	<b>Bus barriers</b>	<b>Social / interaction barriers</b>	<b>Environmental barriers</b>
Sidewalk quality	Distance to bus stop	Stairs	Other sidewalk users	Ice, blowing snow, and accumulation
Sidewalk obstructions	Transit frequency	Seating options	Understanding sidewalk rules	Wind and rain
	Type of transit service	Crowding		Cumulative impact
		Driver habits		

These barriers cannot be viewed in isolation and if more than one barrier is experienced during a trip the impact is cumulative. For transit planning to systematically identify and remove these barriers, transit planners must look beyond the frequency, accessibility, and reliability of the bus itself. Though this is important, the entire trip must be considered – especially how older adults negotiate the built environment. These are the major impacts that were found to cause a ‘break’ in the travel chain of older adults. This means that the older adult, when encountering the barrier multiple times over a number of trips, either changes the method of the trip or no longer seeks to use public transit if other options are available to them.

### 2.6.1 Built environment barriers

The built environment is a key part of any research on public transportation and older adults. Physically accessing transportation and waiting for the bus can be especially problematic. When referring to the quality of sidewalks, there exists conflicting evidence among experts on what barriers take priority over others. The World Health Organization, in a study involving over 30 cities from around the world, indicated that well maintained pavements and pavement surfaces were key barriers identified (WHO, 2006). In other studies, sidewalk obstructions were the most frequently listed barrier by older adults (Rosenbloom, 2009; Grant et al., 2010). Although pavement surfaces were listed as barriers, older adults frequently cited newspaper boxes, vending displays, light standards, and fire hydrants as just some of the obstructions as the most negative aspects that result in the bus becoming a less viable option. Well designed “destination oriented-sidewalks”<sup>1</sup> (Kochera & Bright, 2005-2006, p. 35-36) can help contribute to better access to public transportation and better quality of life for older adults (Besser & Dannenberg, 2005).

### 2.6.2 Physical access barriers

The location of public transportation stops or stations present difficulties for older adults. The location of the bus stop is strongly connected to the distance which an older adult must travel to get to a bus stop and the quality of the bus stop itself. Some older adults mention that

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<sup>1</sup> Destination oriented-sidewalks are wide, well maintained, and often buffered sidewalks that connect transit stops or stations to key destinations (such as malls) with limited interruption or crossings. These sidewalks typically cut across parking lots to provide the most convenient and direct access.

stops are too far from their home or the distance between stops is too great to make walking a feasible option (WHO, 2006; Michael et al., 2006). Both the unsuitable location of stops and poor planning surrounding stops limit access to public transportation for older adults. However, there is not a simple solution. Since older adults are not a uniform group and level of mobility changes with age, some older adults may consider a 400 meter walking distance acceptable, yet for others, it would be extremely difficult to walk 400 meters. Placing a higher frequency of bus stops can limit the efficiency and of the line and may require express buses to meet travel time expectations of users. More flexible solutions like para-transit, dial-a-ride transit, or DART services exist, but can be expensive to operate. An option that is both inexpensive and highly flexible is required for many older adults. More flexible options would include hail-and-ride services or route-deviation services that respond directly to the needs of older adults (Broome et al., 2009).

### 2.6.3 Bus barriers

Even if full and unimpeded access could be provided for older adults, the trip does not end when an individual steps onto a bus. The specific design of the bus or the attitude and driving habits of the bus driver are two examples of other barriers. Barriers encountered on the bus are related to the mobility of the individual. Entry and exit of the bus, stairs on the bus, lack of wheelchair access, uncomfortable seating, or no available seating are just some of the identified barriers (Broome et al., 2010, WHO, 2006). Few studies have examined important features like bus driver friendliness and helpfulness (Broome et al., 2010). A great deal of

importance is placed on the bus driver for older adults, the speed of the bus, the driver's friendliness, and how close the driver pulls to the curb. Bus drivers are seen as information providers and are an important facilitator in trip planning for older adults.

#### 2.6.4 Social / interaction barriers

Interestingly, few studies have looked at user conflict regarding sidewalks. Although people using roller blades, cyclists, skateboarders, and runners are also cited as frequent barriers, no study has framed such a discussion in a wider person-to-person conflict bringing in questions about the capacity of sidewalks as well as how sidewalks are used and by whom.

Questions around the 'control' of the sidewalk led the researcher to explore the dynamics of people-to-people interaction and how older adults perceive other sidewalk users. In a study about walkability in four Ottawa neighbourhoods, Grant and colleagues (2010) found that older adults often call for clarity and policies about who should use sidewalks. Clarifications and questions such as these indicate that older adults feel as though certain individuals either do not belong on the sidewalk, or are using the sidewalk for activities that the sidewalk was not specifically designed for. As one respondent whom was involved in the study by Grant and colleagues stated, there needs to be a "rule book for walking" (Grant et al., 2010, p. 304). The difficulty in using congested sidewalks to link to public transportation has frustrated some older adults. Many older adults have also indicated the need for rule changes, as walking facing traffic when sidewalks do not exist often lead to unfortunate situations where the older adult is splashed by passing vehicles or perceives the vehicles as traveling too fast or too close.

### 2.6.5 Environmental barriers

In much of the literature older adult participants have expressed their concerns over environmental influences related to trip planning and trip decision making. When walking to the bus or waiting at a bus stop older adults have indicated that sufficient shelter from the elements does not exist (Broome et al., 2010b). The most common cited climactic barriers are wind and rain that can delay planned trips (Broome et al., 2010b). However, many of the studies that include concerns over climactic variance are conducted in warm climates where ice, blowing snow, and snow accumulation are not issues. Of the few studies that have been conducted in cold climates, participants consistently emphasize the hostile environment during winter (Grant et al., 2010). Participants with mobility impairments find it difficult to use public transit when environmental conditions are not ideal. These concerns are dependent on ever changing environmental conditions.

## 2.7. Conclusion

Although there are some approaches developed around public transportation for older adults there remains gaps in funding models and municipal implementation. This translates to some shared and common challenges for older adults when using public transportation. Given this, many municipalities are working towards a more comprehensive solution by adoption and promoting aging strategies thereby ensuring appropriate resources are in place.

Transportation is not a stand-alone issue; it is interconnected with housing, socialization, and especially the built environment. For any older adult, regardless of ability, it is critical to



connect origins and destinations in an understandable way. To do so, a better understanding of older adult travel patterns as well as their particular travel chains is needed. There is a need to study the dynamic relationship between public transportation, the built environment, and the physical ability of older adults.

## **CHAPTER 3    WINNIPEG CONTEXT & MUNICIPAL AGING STRATEGIES**

This chapter reviews census, health, and other relevant statistical data in an effort to better describe older adults living in Winnipeg. Also included in this chapter is an analysis of the aging strategy policies in Winnipeg and comparable municipalities across Canada. The goal of this analysis is to understand long-range planning, financial resource allocation, and collaborative approaches related to the implementation of aging strategies.

These two components – the summary of population and demographic data and the comparative analysis summary of other municipalities in Canada – form a basis for the methodological approach in Chapter 4 and the analysis, discussion, and recommendations in Chapters 5, 6, & 7. The policy analysis will provide informative data that can loosely describe how and where the City of Winnipeg places priority on age-friendly initiatives compared to other municipalities. This provides an opportunity to view Winnipeg on a continuum of municipalities that have focused on aging issues. In addition, the comparative analysis informed the semi-structured interview question list which was the primary component of the interview research phase.

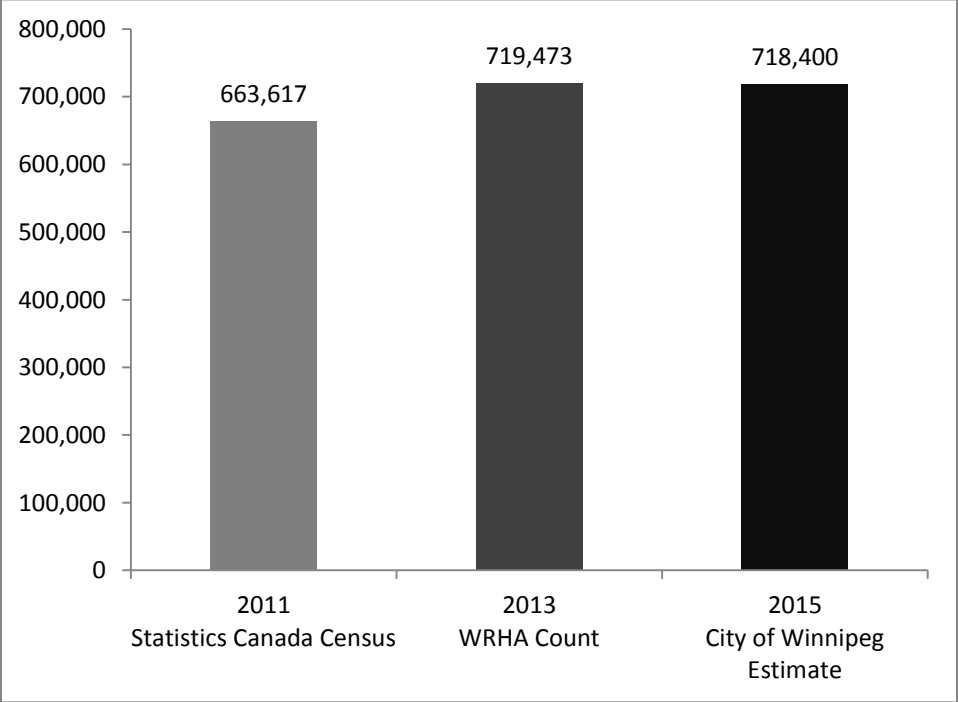
### **3.1. Population**

Following stagnant growth and some population decline in the early and mid-1990s, the population of the City of Winnipeg has been steadily growing since 1997 (City of Winnipeg, 2016). In recent years there have been various governmental and health census measurements

and estimates of population. The City of Winnipeg estimates and Statistics Canada census counts used for this study are based on the geographical boundaries of the City of Winnipeg. The Winnipeg Regional Health Authority (WRHA) includes the communities of East St. Paul, West St. Paul, and Churchill in the population statistics. These outlying communities were removed from the following calculations.

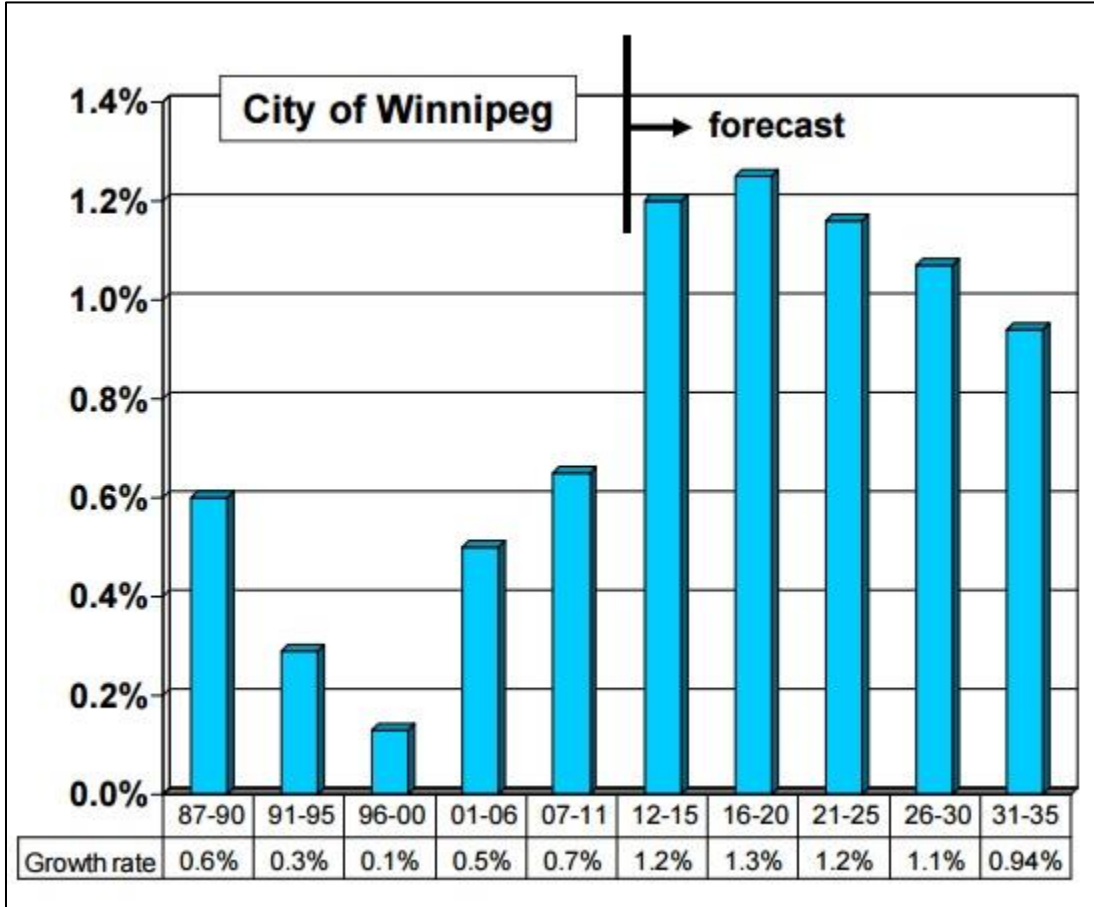
The population of the City of Winnipeg (Figure 1) was 663,617 in 2011 (Statistics Canada, 2012), 719,473 in 2013 (adapted: Winnipeg Regional Health Authority, 2014), and estimated at 718,400 in July of 2015 (City of Winnipeg, 2016).

**Figure 1 - City of Winnipeg population counts & estimates**



The annual population growth rate has fluctuated between 1986 and 2011 (Figure 2) from -0.1% (1996) to 1.2% (2007) but is expected to be between 0.94% and 1.3% in the years leading up to 2035 (City of Winnipeg, 2013).

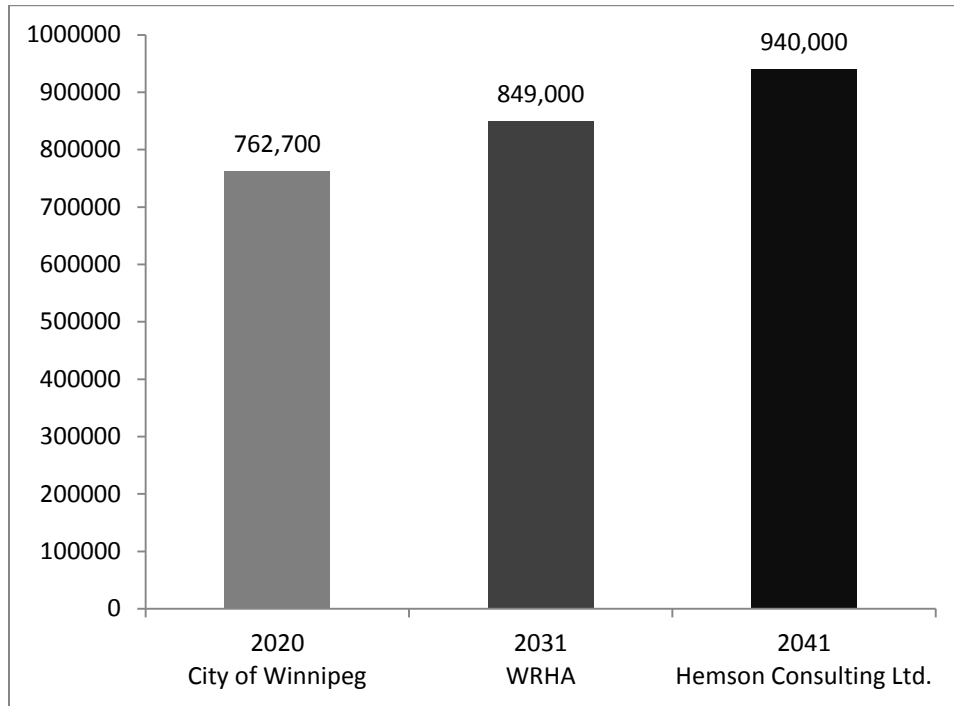
**Figure 2 – City of Winnipeg population growth rate & forecast**



*The City of Winnipeg. (2013). Long-Term Demographic and Economic Forecast for Winnipeg's Census Metropolitan Area (CMA). Retrieved from: [http://winnipeg.ca/cao/pdfs/population\\_forecast.pdf](http://winnipeg.ca/cao/pdfs/population_forecast.pdf)*

There is uniformity in the agreement that the population is expected to continue to grow based on a number of growth scenarios (Figure 3) and the city could reach an estimated population in a medium growth scenario of 762,700 by 2020 (City of Winnipeg, 2016), 849,000 by 2031 (Conference Board of Canada, 2007), and 940,000 by 2041 (adapted: Hemson Consulting Ltd., 2016).

**Figure 3 – City of Winnipeg population projections (medium growth scenarios)**

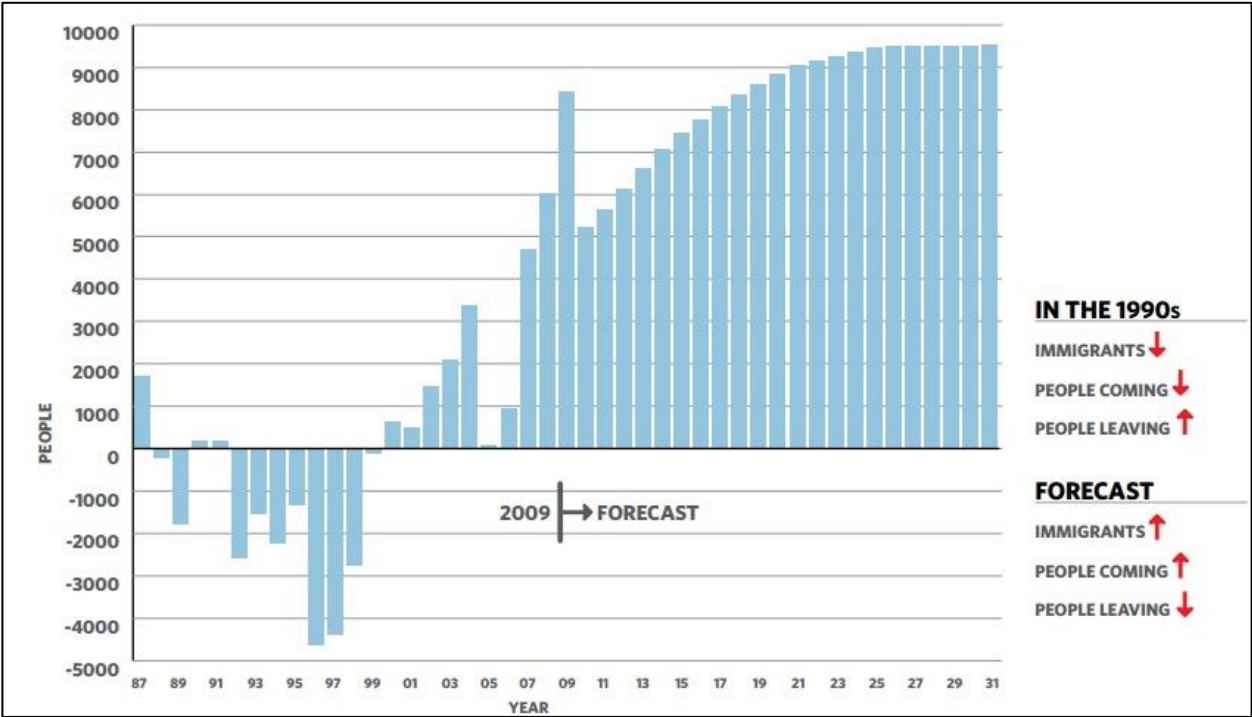


Net migration will account for a majority of the increase (Figure 4). The development of new greenfield communities is anticipated to capture a large percentage of the growth (City of Winnipeg, 2016).

### 3.2. Select demographics

This subsection consists of a review of recent growth in the older adult population cohort, the ratio of male to female older adults, and individual income. The data provided in this section will allow for a comparison between Winnipeg census data and the respondents from the exit survey as part of the focus group. Any notable differences are examined in Chapter 5.

**Figure 4 – City of Winnipeg net migration**

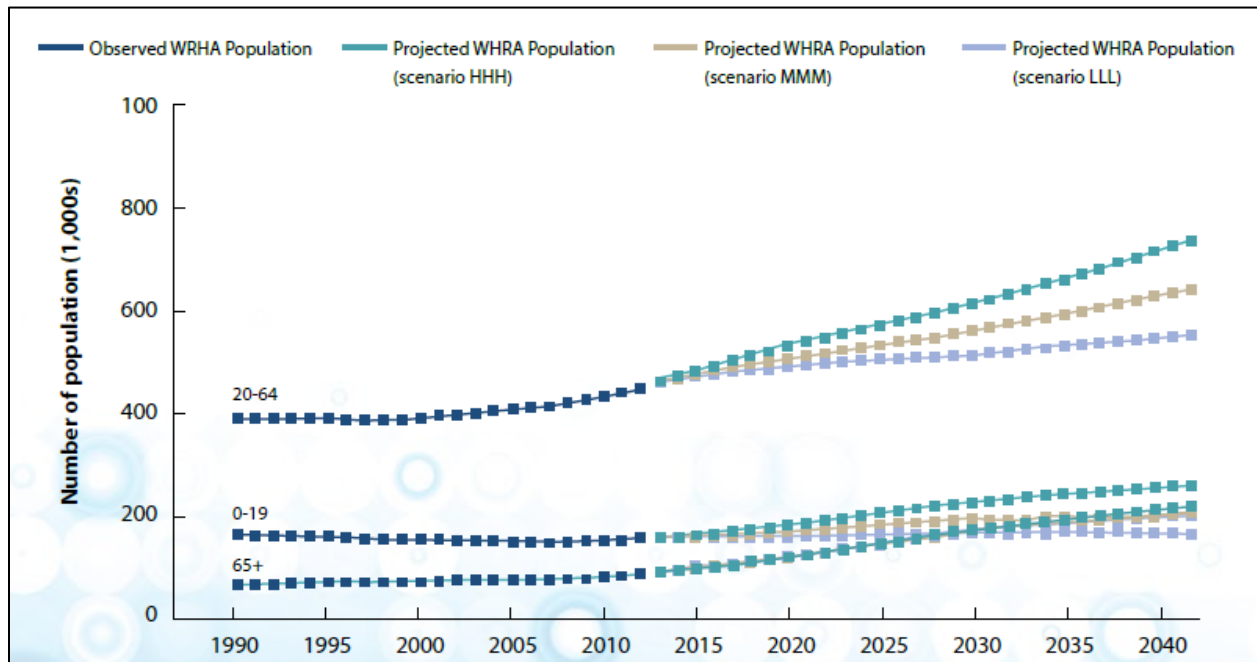


*The City of Winnipeg. (2011). Our Winnipeg. Accessed from: <http://www.winnipeg.ca/interhom/CityHall/OurWinnipeg/pdf/OurWinnipeg.pdf>*

*Data from: Conference Board of Canada. (2007). Long-Term Demographic and Economic Forecast for Winnipeg’s Census Metropolitan Area.*

Population growth is not evenly dispersed throughout the population cohorts. The WRHA estimates that the population percentage of older adults in Winnipeg will increase from 14% to 20% by 2042 (WRHA, 2014). The low and medium growth scenarios project a larger percentage of the population over 65 than under 20 (Figure 5). Contributing to this is the aging of baby boomers and to a lesser extent, the continuation of trends of declining premature mortality rates and increased life expectancy rates (WRHA, 2014). With older adults comprising of more of the population, services like public transit have to be consistently re-evaluated to ensure public transportation meet the needs of these changing demographics.

**Figure 5 – WRHA observed & projected population growth by age group**

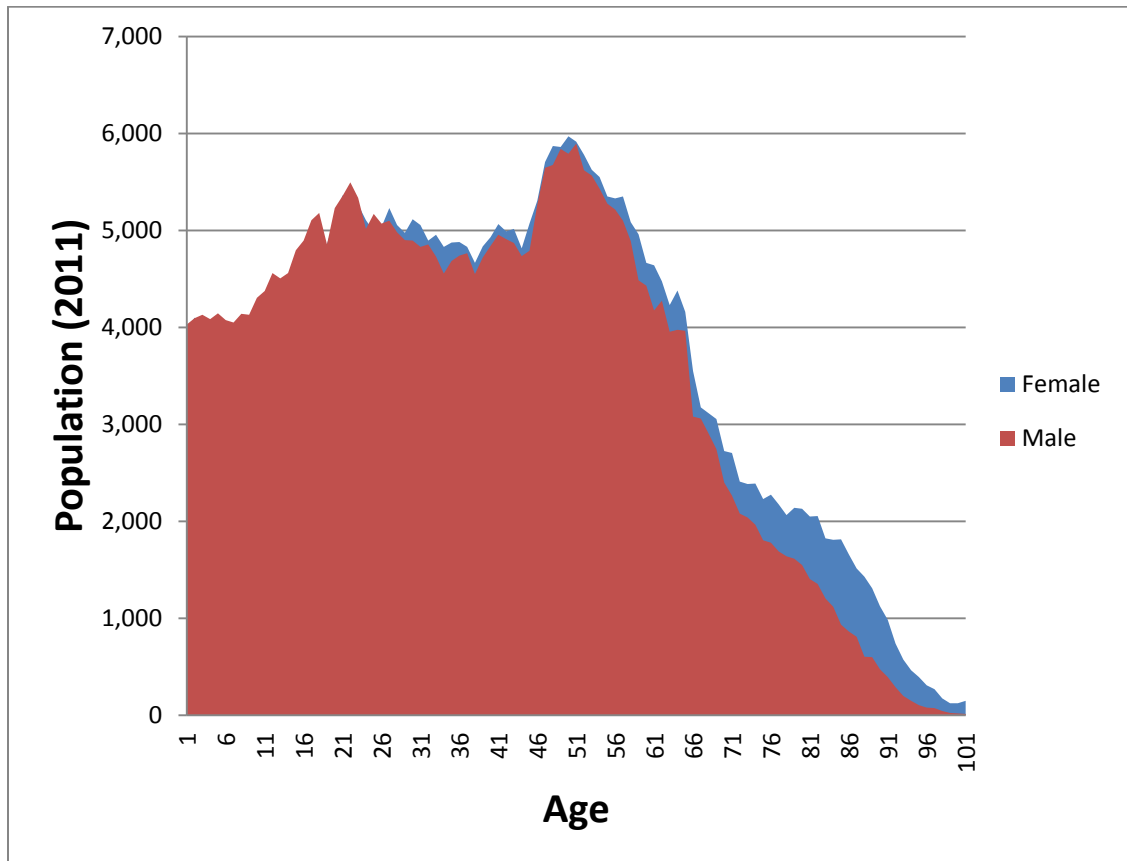


Winnipeg Regional Health Authority (2014). *Community Health Assessment 2014*. Retrieved from: <http://www.wrha.mb.ca/research/cha/reports.php>

Data from: Lin Yan, Lisa M. Lix, Depeng Jiang, Kristine Einarson, Sané Dube. *Manitoba Population Projections, 2013-2042*. George & Fay Yee Centre for Healthcare Innovation, Winnipeg, 2014.

According to Statistics Canada in 2011 48.3% of Winnipeggers self-identified as male while 51.7% self-identified as female. However, the gender population gap increases dramatically when older adults are more closely examined. For those that are 65 and older 41.5% identify as male and 58.5% identify as female. The gap continues to grow for the older population cohorts that are 85 or older. For instance, when just those 85 and older are examined the gap grows to 29.3% male and 70.7% (Figure 6; Statistics Canada, 2013). This age-gender gap indicates that there are many more female older adults than men.

**Figure 6 – Winnipeg’s age-gender gap**



*In Winnipeg, the age-gender gap becomes more noticeable and begins to expand rapidly after the age of 65. 58.5% of older adults (65+) identify as female.*

Adapted from: Statistics Canada. 2012. *Visual Census. 2011 Census. Ottawa. Released October 24, 2012.*  
[http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/vc-rv/index.cfm?Lang=ENG&TOPIC\\_ID=2&GEOCODE=602](http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/vc-rv/index.cfm?Lang=ENG&TOPIC_ID=2&GEOCODE=602) (accessed November 17, 2016).

Financial determinants have a major impact on transportation choices available to older adults. In 2011, average gross individual income (before taxes) for all Winnipeggers was \$38,159 excluding those that did not work and individuals under the age of 15. Average gross income for those 65 or older was \$29,661 (Statistics Canada, 2013). There are also differences in gender and cohorts within the older adult population. Older adults are increasingly



remaining part of the work force in what are viewed as traditional retirement years. Figure 7 illustrates that Winnipeg, like many Canadian cities, is divided into several sectors based on income distribution. Income and location can have a significant impact on travel choices available to individuals. The graphic below depicts Winnipeg broken into five income quintiles based on family income.

### 3.3. Development - growth and distribution

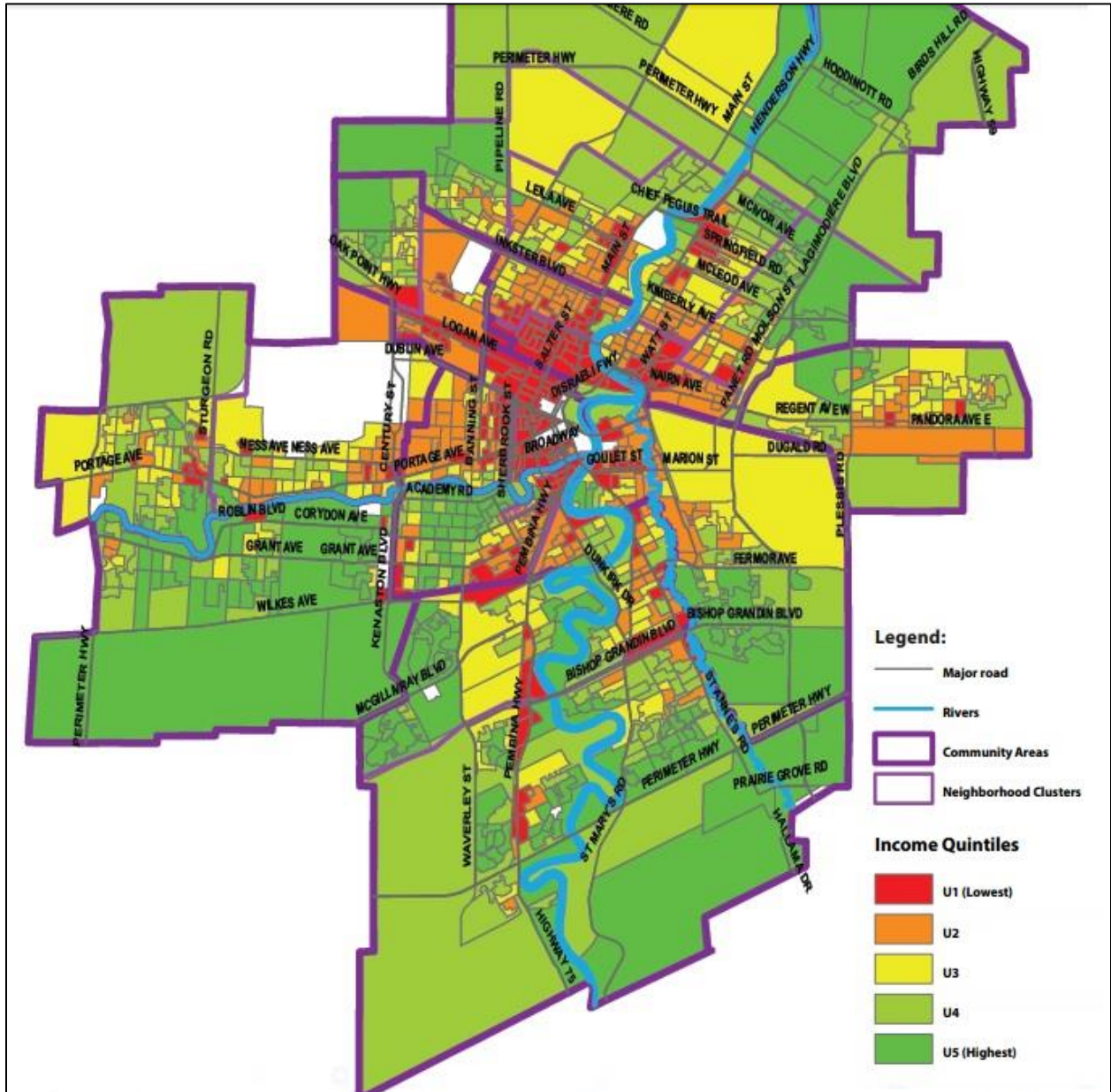
In order to understand where older adults have choices to live it is important to look at where and how the City of Winnipeg is encouraging investment, growth, and development in communities. The long-range planning document, *Our Winnipeg Complete Communities*, focuses on significant intensification of vacant or underutilized lands, the development of greenfield communities, and modest intensification of Regional Mixed-Use Centres<sup>2</sup>. However, the majority of the city and its residents fall into what has characterized as Areas of Stability (Figure 8).

The policies for Areas of Stability are set-up to ensure that new develop integrates into the existing built form and respects the fundamental development and design characteristics of adjacent parcels and the community in general. However, design criteria do not form an important component of development approval in new communities. This continues to push many developers to develop new lands that offer a more stable return on investment than to look for intensification opportunities.

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<sup>2</sup> Regional Mixed Use Centres are intensely developed, city-wide or regional attractions. They are well-served by public transit and can contain mixed use development, including residential and specialized employment, commercial or cultural services. (*OurWinnipeg Complete Communities* p. 42).

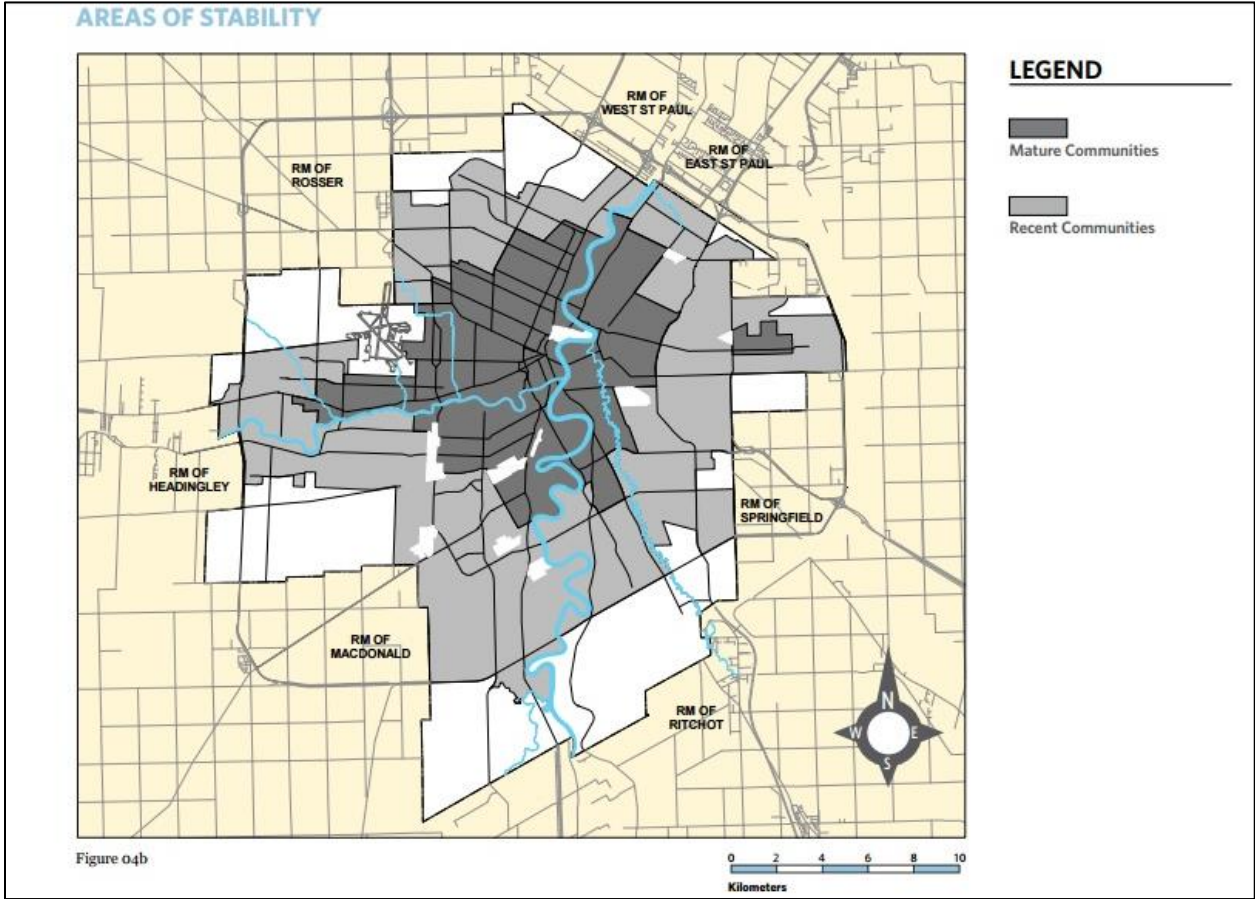
**Figure 7 - Income distribution by census dissemination area (2006)**



*Income Quintiles: Based on Average Household Income by Census Dissemination Area; Calculated by MCHP for urban area of MB.*

*Map: Created by Research and Evaluation Unit, WRHA January, 2013*

**Figure 8 – Areas of Stability**



New communities require upgrades, oversizing, and changes to many city services in order to accommodate growth on the edge of Winnipeg. This includes transit services. If many of the developments that are designed to accommodate older adults are built in these new communities then services, like transit, will have to be extended to provide service to these areas if transit is provided at all. The service will almost certainly be at a lower frequency than in existing areas of Winnipeg. It is inefficient and becomes overly expensive to serve many of these outlying areas which may impact how transit is provided to existing communities. Unfortunately, this seems to be the predominant development pattern that is occurring in Winnipeg with many 55+ and life/lease developments located in areas that are not served by

transit or are in close proximity to services. The City of Winnipeg has encouraged developers to improve the linkages to services in these new communities by installing sidewalks and adding safe crossing locations. However, this does not address the underlying issue of continued growth on the edge of the city which becomes more unsustainable for the provision of transit services.

Locating new development that is geared towards older adults outside of much of the existing urban structure of Winnipeg has a direct impact on the ability of older adults to lead high-quality lives and could lead to social isolation.

### 3.4. Transportation

Like many of Canada's large urban municipalities, there are a number of transportation options provided for older adults in Winnipeg. Public transportation provided by Winnipeg Transit consists of regular bus service operating on a feeder and trunk system, four DART (dial-a-ride-transit) service routes, handi-transit, and a single bus rapid transit (BRT) line which is currently being extended to the University of Manitoba. In recent years Winnipeg Transit has focused on improving accessibility to transit and has added next stop announcement, improved bus stops, and low floor buses that include accessibility features such as the ability for the bus to crouch, flip down ramps, and priority seating (Winnipeg Transit, 2016). The new reloadable prepay smart cards were also rolled out to older adults before the general public.

A number of alternative service providers also operate in Winnipeg with service geared specifically towards older adults. Transportation Options Network for Seniors (TONS) is a

volunteer network focused on “transportation options that enhance quality of life and promote age friendly communities” (About TONS, 2016). TONS connects older adults with volunteer drivers, seniors’ centres, and seniors’ resource councils that can provide older adults with transportation options available to them for their needs (Manitoba Seniors Guide, 2015-2016).

Data on transportation uses for those 65 and older from Statistics Canada is not adaptable to look at the travel habits of older adults as the data is collected for the working population.

### 3.5. Comparative municipal aging strategies

Municipalities across Canada are working to address transportation needs of older adults (Carstairs & Keon, 2009). The researcher has selected a range of comparable municipalities across Canada to outline some of the major strategies and objectives. Aging strategies from the City of Calgary, the City of Edmonton, the Regional Municipality of Halton<sup>3</sup>, and the City of Ottawa, were reviewed. A preliminary review of the City of Winnipeg was also included. Information was gathered through online publically available information. In some instances requests were made to municipalities where detailed reports, background documents, or primers were not accessible online. These above noted municipalities were identified as having recently undertaken, approved, or are in the process of applying aging strategies in various degrees. Each of the selected municipalities is also a major service provider for public transportation and similar in terms of population to the City of Winnipeg. This means that each

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<sup>3</sup> The Regional Municipality of Halton consists of the urbanized areas of Oakville, Milton, Georgetown, and Burlington as well as an extensive rural area. Although each municipality provides its own public transit the regional government ensures extensive integration between the systems both in terms of Go Transit and inter-municipal transit routes. The Regional Municipality of Halton extends significant influence over municipal decisions and sets transportation priorities from right-of-way requirements for roadways to the development of employment lands.

of these municipalities has more flexibility than smaller municipalities to realign capital and operating funding to meet new goals identified in aging strategies.

Other municipalities could have been included. The researcher selected a sampling of municipalities to inform or provide experience in the selected topic range following this section. The purpose of developing several discussion sub-sections was to understand how aging strategies effect transportation decisions and the involvement of older adults in the planning and implementation processes.

Rather than focusing on an analysis of each municipality individually, the discussion in the following subsections is built around several topic areas – comparing and contrasting different approaches to organizational structure, engagement, evaluation tools, directed resources, transit improvement, and partnerships. These topics are summarized in Table 2 on the next page.

Municipalities remain the central actors in providing services like public transportation to older adults. Many larger municipalities undertake a systematic approach to evaluating public transportation models and adapting to the needs of older adults. This is typically completed through strategic planning initiatives under the responsibility of asset management, planning, or in some cases involves the public through advocacy committees.

**Table 2 – Comparative municipal aging strategies**

	Calgary	Edmonton	RM Halton	Ottawa	Winnipeg
Engagement with older adults and/or administrative support	Dark Blue	Dark Blue	Light Blue	Light Blue	Light Blue
Steering committee(s) with older adult involvement	Dark Blue	Light Blue	Dark Blue	Dark Blue	Light Blue
Compiled list of city-wide services for older adults	White	Light Blue	White	Dark Blue	Dark Blue
Significant implementation and milestones met	Dark Blue	Light Blue	Light Blue	Dark Blue	Light Blue
Monitoring and/or publishing	White	White	Light Blue	Light Blue	White

**Legend:**



= fully implemented



= partial or in-progress



= no discernable information

**3.5.1 Engagement with older adults and/or administrative support**

There is evidence that all five of the municipalities are placing emphasis on engagement with older adults. Edmonton and Calgary have made engagement with older adults a central focus of implementing the recommendations of their age-friendly action plans. Halton, Ottawa, and Winnipeg have also made strides.

Public engagement and participatory planning are a key part of planning successful public transportation systems for older adults. In Edmonton, the age-friendly initiative is led by a partnership between the City of Edmonton, Edmonton Seniors Coordinating Council, and Age Friendly Edmonton. These groups partner with organizations and specifically focus on education of older adults about housing and public transportation options available (“Age

Friendly Edmonton”, 2014). Calgary has undertaken extensive engagement with older adults as background information for an age-friendly strategy completed in 2015 (“Seniors Age-Friendly Strategy”, 2016). Reports created outline concrete actions with timelines for implementation. In both Edmonton and Calgary there are several dedicated staff across various departments collaborating on how to provide a more livable city for older adults.

Halton, Ottawa, and Winnipeg conduct engagement activities with older adults but this engagement is typically done on a project by project basis rather than regular or periodic engagement. None of these three municipalities have a fully dedicated full-time staff member that is intended to support these activities. Though, in Winnipeg, one of the primary duties of the Universal Design Coordinator is to connect older adults in the community with city resources.

### 3.5.2 Steering committees with older adult involvement

All of the municipalities reviewed have at least one advisory committee set-up to make recommendations to decision-makers and municipal staff on a range of issues. The composition and objective of these committees is quite diverse. The structure in most of the municipalities is set-up in such a way that the committees are action-oriented and striving towards a specific goal. Calgary, Halton, and Ottawa are more advanced as the input from older adults has had a direct and tangible effect on the outcome of city initiatives to improve accessibility to transit and other municipal services.

The City of Calgary established the Advisory Committee on Accessibility which consists of two sub-committees; the Access Design Sub-Committee and the Transportation Services for



People with Disabilities Sub-Committee (“Advisory Committee on Accessibility, 2015). The focus in Calgary is very much on improving public transportation services. The sub-committees consist of several older adults, stakeholders such as the handi-transit association, as well as select staff from city departments. The sub-committees continue to work with the city on moving towards adopting an age-friendly strategy and have produced several brochures available online to help raise awareness of the work of the sub-committees.

The Regional Municipality of Halton has a similar committee structure to that of the City of Calgary but because Halton is a regional municipality the RM is much more broadly focused on services that promote general well-being. As well, the committee extends beyond municipal staff and stakeholders to include councillors (“Older Adult Advisory Committee, 2013).

The City of Ottawa has conducted extensive work around ensuring that older adults have input in the decision-making and implementation process of plans, including transportation operations, that effect older adult’s use of the system. The Older Adult Plan Advisory Group and Steering Committee as well as The Council on Aging of Ottawa has partnered with OC-Transpo to raise awareness on “seniors’ transportation choices and challenges” (“Ottawa Seniors”, 2014). The Council is volunteer based organization and draws on expertise from their members as well as city staff and collaborate with The Council on projects. Broadly, the advisory group has been working with hospitals, Ecology Ottawa, The City of Ottawa, and community associations to have open forums, discussions, and research on hospital parking, information events, older drivers, pedestrian safety, public transit, and rural transportation. The main medium through with the advisory group and sub-committees

divulge their reporting is the “CHOICES” information document distributed to the older adult community and updated on an annual basis (“The Council on Aging of Ottawa”, 2014).

There is less information on the composition and objective of the Edmonton age-friendly committee. There is reference to the group being responsible for developing actions to tackle specific issues (“Vision for an Age-friendly Edmonton Action Plan”, 2016) but further details are not yet available.

The Mayor’s Senior Advisory Committee in Winnipeg has undergone some changes in recent years to expand the goals of the committee. In conjunction with the adoption of the *Age-Friendly Winnipeg Action Plan* in mid-2014 as part of the Age-Friendly Manitoba Initiative the committee was re-established as the Mayor's Age-Friendly and Seniors Advisory Committee (“Winnipeg Age Friendly Initiative”, 2012). Another committee in Winnipeg is the Access Advisory Committee that focuses more on services provided to people with disabilities. As well, there is a Policy Advisory Committee focuses on accessibility related issues for public transportation. However both of these groups operate on the periphery of the decision-making process in Winnipeg.

### 3.5.3 Compiled list of city-wide services

Listing services available to support older adults is an important metric that is established in all of the age-friendly action plans of the five municipalities. Although resources are available from a number of physical and digital locations, only Winnipeg and Ottawa have invested in the commitment to provide older adults with a compiled list of all services. In Winnipeg, all age-friendly services have been compiled online under the Accessible and Age

Friendly Services page (“Age Friendly Services”, 2015). The page is organized both by type or category of service for ease of use and understanding. Ottawa, as well, provides a compiled list of services on one page. In addition Ottawa has embarked on an ambitious *Community Connect Training* program targeting helping citizens identify socially isolated older adults in the community and referring them to appropriate services (“Community Connect”, 2013).

#### 3.5.4 Significant implementation and milestones met

All five of the municipalities examined in this review have implemented some aspects of their age-friendly action plans. Both Calgary and Ottawa deserve closer examination as these municipalities have made significant strides to providing high-quality integrated services to older adults a cornerstone of public transit and enhancing the built form.

In Calgary, there are many aspects of barrier-free design incorporated into the overall public transportation system. The main achievement is Access Calgary (“About Access Calgary”, 2014). Although Calgary only recently adopted an aging strategy, the coordination of public transportation systems has been a success story. Access Calgary books, schedules, and dispatches shared-ride door-to-door transportation services. This is supplemented with a well-developed handi-transit service and reliable and accessible public transportation system with a high-level frequent network. In addition, Calgary like many municipalities, offers a subsidized transit pass for older adults.

Ottawa has a similar program to Calgary but in the case of Ottawa, the program is supplemented with an ambitious taxi subsidy program to provide a greater range of options to older adults. In 2013, the taxi coupon subsidy was increased by \$100,000 to a total of \$250,000

to better enhance and promote the program (“Older Adult Plan – Overview”, 2014). In areas where there are high concentrations of older adults the municipality has installed new pedestrian activated signal technology, a greater frequency of benches beyond the minimum identified in development standards, replaced bus shelters, streamlined snow removal around transit stops, and developed a comprehensive online guide to all services and programs for older adults.

Edmonton, Halton, and Winnipeg have also made progress. Some key areas of focus include upgrades to technology and bus timing, enhancing door-to-door transportation options, and adding new pedestrian signal technology at key intersections. However, these programs and initiatives came about as part of capital projects in transit, public works, and engineering, and do not appear to be the result of input from older adults or the implementation of aging strategies or an action plan.

### 3.5.5 Monitoring and/or publishing

Modeling and evaluation tools, for the most part, are somewhat lacking at the municipal level. It is sometimes a question of resources, or insufficient inter-departmental collaboration (Hatzopoulou & Miller, 2009). Transportation planning poses its own unique issues. Many of the route determination factors, ridership, frequency, and indicators of success are objective and quantifiable. However, the human side of public transportation is almost entirely opposite – subjective and qualifiable. This becomes even more evident in providing public transportation improvements that are designed with older adults in mind. Many of the

committees and groups referenced in the previous subsections have a strong component of experience-based recommendations. Often transit agencies pass over the unmeasurable side of transportation planning as it can be difficult to add this into predictive models and therefore have limited applicability in decision-making (Hatzopoulou & Miller, 2009). The main mode of transportation research for evaluating the habits and concerns of not just older adults but users in general is surveys (see Mercado et al., 2007; “Transportation Tomorrow Survey for the Greater Toronto and Hamilton Area”, 2014). Data collection to determine performance based evaluation remains a challenge in each of the municipalities reviewed.

In the Regional Municipality of Halton, the Elder Services Advisory Committee hosts bi-annual forums for sub-committees and outside agencies to share information from different forms of data collection thereby generating a framework of understanding of local issues in Halton to compare with international / national best practices and outside agencies (FCM, 2013). These collaborative partnerships can “develop innovative and constructive approaches” (Carstairs & Keon, 2009, p. 90) to public transportation geared towards older adults.

None of the other municipalities reviewed have made inroads into monitoring conditions or publishing data related to age-friendly action plans at this time.

### 3.6. Conclusion

The population of Winnipeg is growing and is expected to continue to grow for the next several decades. Growth of the older adult population is outpacing all population cohorts under 65. Net migration, aging baby boomers, declining premature mortality rates, increased life

expectancy rates, and the gender gap are changing the composition of demographics. The City of Winnipeg and other governmental and non-governmental organizations must plan and adapt to these trends.

A sampling of municipalities across Canada demonstrates mixed approaches in which urban professionals must work within. Although there are some commonalities, each municipality has developed a unique approach to public engagement and committee structure that affects the type of changes that are implemented and the level of study and analysis that is completed prior to acting on recommendations. The committees that some of these municipalities have set-up to direct aging strategies see the “first-hand needs and pressures created by the lack of affordable or available transportation” (Carstairs & Keon, 2009, p. 90). Some of these committees regularly report to senior levels of administration and can have an impact on the level to which aging strategies are funded and implemented. To continue to find success municipalities must constantly evaluate and re-evaluate priority areas to adjust to changing demographics and ensuring that public transportation is flexible, adaptable, and responsive to the needs of older adults.

## **CHAPTER 4      METHODS**

Chapter 4 describes, in detail, the methods used to conduct this research. The methods were comprised of semi-structured interviews with professionals working for the City of Winnipeg, and a focus group supplemented by a brief survey with older adults. All data was transcribed at the conclusion of each research phase. Open, axial, and selective coding was applied as described by Neuman (2000) to identify themes and guide the analysis, findings, and recommendations.

### **4.1.    Methods design**

The selected methodological approach to this study was established by evaluating a range of approaches used in comparable literature while keeping in view the goals and research questions. A majority of the theory and literature frames similar research at the intersection of human behaviour and the underlying values and priorities applied when officials make decisions that shape transit in municipal jurisdictions. This humanistic understanding goes beyond ridership data to examine the very personal aspects of human behaviour and utilizing transit services. However, it is also worthwhile to acknowledge that although transit decisions are, in large part, governed by internal behaviour and world view it is important to recognize that data collection for a transit agency is almost entirely quantitative and measurable. Ridership data, user satisfaction surveys, route development, and scheduling are filtered through detailed computer modelling systems. The implementation of a blended approach

suits the goals and objectives of this practicum. A blended approach allows the researcher to balance the quantitative and qualitative aspect of the subject matter.

## 4.2. Interviews with professionals

The goal of the interviews was to answer the first and third of the research questions as noted in Section 1.3 of this practicum. There was a specific focus on how decisions are prioritized when it comes to barrier-free design, the current funding model for public transportation, and how overarching planning documents are implemented. The interview questions have been informed by the literature review, objectives of this research, and analysis of municipal frameworks for funding, modeling, and evaluating public transportation systems. The interview questions guided the interview process so as to create meaningful dialogue with each participant. Participants could describe, in their own words, the perceptions and reality around the Winnipeg experience for designing and implementing public transit for older adults. Interview questions are compiled in Appendix B.

### 4.2.1 Sample

A purposive sample technique was used to identify potential participants. A purposive sample technique is used when it is important to select “individuals who are considered representative because they meet certain criteria for the study” (Bui, 2009, p. 143). Urban professionals employed by the City of Winnipeg in or associated with the fields of planning, transit, corporate services, and finance were targeted for interviews. Appendix C contains a copy of the initial contact email sent to potential participants. Of the four potential participants



contacted in the first round, three potential candidates responded and agreed to in-person interviews. The interviews were conducted in June 2016. Through the course of these interviews participants indicated that other suitable candidates may be able to provide additional detail to some of the research questions. At the close of these interviews the researcher's contact information was left with the each interviewee to forward to other colleagues. Ultimately, two other potential participants contacted the researcher by way of email and were interviewed in a second round of interviews held two months after the initial three interviews. These two interviews were held in August 2016. A total of five in-person semi-structured interviews with professionals employed with the City of Winnipeg were conducted.

The specialized nature of each interviewee's role as an employee of the City of Winnipeg gave the necessary depth in order to examine the details of public transit in Winnipeg - from funding to implementation. No one interviewee was able to provide a general overview of city processes on transit planning, prioritization and funding for the needs of older adults, and the implementation of successful public transit service for citizens. The semi-structured interview process supported the understanding of the specialized roles of each individual. Through this, a complete understanding of each role as well as a detailed understanding of public transit in Winnipeg was constructed.

#### 4.2.2 Conducting the interviews

Detailed interview protocol is included in Appendix D.

Throughout each interview the researcher used reflective probes as described by Zeisel (2006) to confirm what had been heard as well as for the researcher to probe deeper into specific areas. Interview questions comprised of a standard list that was asked of each interview participant as well as some specialized questions related to the position and job duties of the individual. Both the standardized and unique questions were structured so that the researcher was able to cross-compare the results of the interview with the findings of the focus group and exit survey with older adults.

The five interviews ranged in length from 45 minutes to 80 minutes. Each participant was given an opportunity to review and correct the transcribed interview to reflect their understanding. None of the interview participants asked for revisions to the transcript though two participants did note areas of concern, both during the in-person interview and in the transcription, which were redacted due to political and professional implications. These sections were removed from the transcription of these two interviews.

### 4.3. Focus group with older adults

Focus groups were identified as an appropriate methodology for this research as one of the goals was to build a shared understanding of the status of public transit in Winnipeg. A focus group allows participants to describe, in their own words, the limitations of public transportation service (Flowerdew & Martin, 2005). Conducting focus groups with older adults is an appropriate method given the objectives of this research. A focus group opens up participants to each other's ideas, and allows conversation to build through listening to how others perceive public transportation.

As the level of public transportation service depends on location, the researcher planned to conduct one focus group in an urban setting and one in a suburban area of the city with a majority of the participants living near the selected areas. Ultimately, the suburban focus group was cancelled as only three individuals had enrolled. The urban focus group was expanded to contain participants that resided in both urban and suburban locations in Winnipeg.

#### 4.3.1 Sample

Contacts were made with Seniors Resource Council representatives using publically available information. Unfortunately, due to the timing in which these contacts were made, in June of 2016, it was identified to the researcher that recruitment may be difficult as there was not a substantial amount of programming at the time. Recruitment was attempted by casting a wide net by placing posters in the community centres in which the focus groups were proposed to be held, as well as at nearby retirement homes, and adjacent municipal facilities. A copy of the standardized poster is included in Appendix E. If potential participants were not comfortable with contacting the researcher directly staff and administrator contacts at each of these locations were supplied a list of frequently asked questions (Appendix F).

Sampling for the focus groups was completed using the purposive sample technique to recruit specific participants that met the pre-determined criteria.

1. Participants must be at least 65 years of age;
2. Participants must utilize public transportation in Winnipeg; and

3. Participants must live within the “*Neighbourhood Cluster*” as identified by the City of Winnipeg in which the focus group will be held.

To maintain as much diversity in the focus group as possible no further restrictions were placed on participant enrollment. Certain groups of older adults will naturally be underrepresented. The researcher chose to focus strictly on older adults that utilize public transportation – whether experienced or new. The goal was to capture those that both used public transit reasonably frequently and therefore had a deep understanding of the issues as well as those that use public transit less frequently and therefore may have experienced a significant barrier that deters them; i.e. a break in their travel chain.

Through the five week active recruitment period from late June 2016 to early August only three qualifying participants were enrolled even after utilizing all recruitment methods including direct contact from staff members and facility administrators. To compensate, the strict limitations on location were eliminated and the researcher hosted one combined mixed focus group drawing both urban and suburban candidates. Section 1.6 discusses the limitations of the combined group since this would no longer allow for comparison between urban and suburban transit users.

To ensure the success of the mixed focus group one of the researcher’s committee members provided a contact that worked at a community centre. It was suggested that this administrator could aide in organization and enrollment. Outreach to organize the mixed focus group at the community centre took a very different form than that of the prior attempts. The committee member coordinated discussion between the researcher and the community centre’s administrator. All interested participants contacted the administrator directly rather

than the researcher. The administrator was provided a similar frequently asked question sheet as the staff that aided in recruitment for the cancelled urban and suburban focus groups. Posters were still used to gather interest. Although the researcher was unable to have direct contact with the participants this was offset by the familiarity and trusting relationship with the administrator. Seven participants registered that met the revised purposive sample recruitment method.

The researcher had the opportunity to meet and socialize with several of the participants prior to the focus group to confirm their enrollment and interest. As the focus group was held after lunch at the community facility three other qualified participants came forward during lunch and enrolled bringing the total number of participants to ten. The focus group was hosted the first week of August 2016.

#### 4.3.2 Research aide

A research aide was utilized to support the focus group. The research aide is a personal friend and fellow graduate student from the Masters in City Planning program. A confidentiality agreement was signed prior to employing the use of the research aide (Appendix G). The role of the research aide was to take notes on the discussion in the event that the voice recording device could not properly track the focus group discussion given the number of participants. The aide also has strong knowledge of transportation planning and was able to assist in guiding discussion. This also offered an opportunity for the researcher and aide to compare notes to validate several topics and recommendations by participants at the close of the meeting. The aide was compensated for his contribution to the organization and hosting of

the focus group. The role of the research aide was explained to all focus group participants prior to commencement of the focus group discussion.

#### 4.3.3 Travel Chain Approach

The Travel Chain Approach (TCA) played a critical role in the design execution of the focus group. The concept of travel chaining is defined as “all elements that make up a journey, from the starting point to destination – including the pedestrian access, the vehicles, and the transfer points. If any link is inaccessible, the entire trip becomes difficult” (WHO, 2011, p. 179). The TCA focuses on individual aspects of the transportation experience and overall accessibility. Any break in the travel chain represents a breakdown of the individual use of the transportation system as a whole. Effective public transportation links origins and destinations in an unbroken series of physical and mental tasks. Public transit service must be reliable, frequent, and link origins to destinations (Smith, 2001).

The TCA has been applied to bus transportation with a specific focus on older adults (Broome, et al., 2010b; Carlsson, 2006). The TCA was appropriate method to apply to a focus group dealing with public transportation as it exposes and allows exploration into specific actions that agencies responsible for providing public transportation may not necessarily focus on or give the proper attention.

In this focus group the researcher provided two examples of travel chaining through verbal discussion supplemented by illustration on a flip chart. Participants understood the importance on honing in on specific weaknesses or breaks in the travel chain in order to assess how participants perceive and use public transit in Winnipeg.

#### 4.3.4 Focus group questionnaire

To combine the TCA with the Nominal Group Technique (discussed in the following section) the researcher developed a questionnaire for circulation to focus group participants (Appendix J). Some participants may not have used transit services recently. The purpose of the questionnaire was to help participants recall the various aspects of trip planning, accessing the bus, and completing the trip. Emphasis was placed on the potential barriers that older adults may have encountered in various stages of their individual travel chain. The results were shared with the group and validated in order to demonstrate the commonality or rarity of certain barriers.

The questions asked in the questionnaire were developed by the researcher. The questions selected were pulled together in a way that follows the chronological order of trip planning. Many of the questions were designed to be similar to that of comparable literature that applied an aspect of the Travel Chain Approach or the Nominal Group Technique. The key studies that informed the questionnaire were Grant and colleagues (2010), Broome and colleagues (2010b) and Carlsson (2006). In the development of the questionnaire some discretion was applied by the researcher given the Winnipeg context. For instance, questions on the accessibility of the bus, accessing the bus during the winter, and questions around the availability of transit information were added by the researcher with the express goal of answering the research questions of this practicum. The researcher's own bias is apparent in the development of this questionnaire and is discussed in Section 1.6 Limitations and assumptions.

To mitigate bias towards participants more actively involved in discussion all items were voted on using the Nominal Group Technique. Results from the focus group TCA were cross-referenced with findings from the interviews with professionals working with the City of Winnipeg. Findings were used to build the analysis, discussion, and recommendations in later chapters of this practicum.

#### 4.3.5 Nominal Group Technique

The Nominal Group Technique (NGT) is a research method that facilitates the generation of ideas through group discussions. Researchers employing the NGT utilize a democratic voting system to rank and order the priority of problems or solutions. NGT is typically utilized in research methods that involve the TCA in combination with focus groups. Broome and colleagues (2010a) successfully engaged the TCA to determine common transportation related barriers and facilitators encountered or perceived by groups. The study provided an opportunity for participants to rank the importance of common transportation related barriers and facilitators through a democratic voting process.

Through thoughtful research design, a NGT focus group can engage participants that may be shy, nervous, less-engaged, or simply take some time to warm-up to a focus group discussion. There are multiple ways of engaging all group participants equally. Examples include allowing participants to work through questions themselves before entering a round robin session allowing each participant to speak, writing down potential concerns or solutions and sharing them one at a time, the facilitator tactfully making use of specialized engagement materials, and many more (Delbecq & Van de Ven, 1971; McMillan et al., 2014; CDC, 2006).



By limiting the domination of specific voices and allowing participants to prioritize a range of barriers and facilitators indicated by the entire group participation levels increase and solutions represent a synthesis of multiple perspectives (CDC, 2006). Although NGT ensures all voices are heard and treated equally, the process of NGT is rigorously structured and thought through well in advance of the focus group. NGT processes lack flexibility. Researchers also acknowledge that NGT “can be less stimulating” (CDC, 2006, p. 2) than other techniques because the rigidity does not allow for full development of ideas. However, employing the NGT is an excellent methodology for focus groups and fits well with the goals and objectives of this practicum. The benefits outweigh the inflexible structure that goes into the focus group design.

In this practicum the major components of the NGT included: the development of a questionnaire; silent reflection to work through the questions; discussion and participation as a group where individuals get the opportunity to share experiences and build a common understanding with prompts and guidance from the researcher; and categorizing and voting on priorities.

The researcher, as the focus group facilitator, gave time for participants to think about their public transportation experience and provide personal insight to the questionnaire. Responses were discussed with the group and the researcher engaged as much as possible with each participant to ensure equal input when listing public transportation issues. The researcher used selective prompts to further appreciate why specific aspects of public transportation were particularly challenging and routinely asked the group to confirm agreement or add further insights. To make participants more comfortable personal stories of using transit were encouraged.

As key themes emerged the researcher was able to centralize discussion on topics that were particularly important to the group for further explanation. After the general discussion the researcher distributed the exit survey to participants. During this time the researcher compiled discussion notes.

Areas of concern were summarized on a flip chart and voted on by participants. This provided an equal opportunity for participants to provide further ideas and experiences as it moved the focus group discussion to a deeper level taking a detailed look at specific barriers that have major impacts on access to public transportation for older adults. Each participant was given the opportunity to vote on the nine consolidated categories. One individual elected not to participate in the voting process of the focus group. Each of the participants was permitted to vote five times thereby selecting the five categories most important to them.

#### 4.3.6 Conducting the focus group

Once all focus group informed consent forms were completed (Appendix H), a brief questionnaire was circulated to all participants. Each participant worked through the various questions and made notes as individuals rather as a group. As participants reviewed the questions, the researcher summarized the questionnaire and how each question related to the TCA. A diagram and trip examples were used to facilitate the understanding for the group. As well, a visual collage of potential barriers compiled by the researcher was used and explained as a prompt to some of the real experiences and challenges some of the participants may have encountered.

The researcher went through each question in the order presented to the participants on the questionnaire. Most of the discussion was amongst the group and very little prompting was required. The researcher recorded brief notes on a flip chart and gave various opportunities for participants to validate the generated data through continued discussion. The NGT helped to frame discussion, determine common/shared experiences, and limit dominating personalities while providing voice and equal opportunity for input from participants less engaged. Follow-up questions and prompts were formulated around these specific topics to ensure proper emphasis was given. NGT is discussed both in theory and how it was utilized in this particular focus group in Section 4.3.5 Nominal Group Technique.

The focus group concluded after 80 minutes including providing individual consent, the research explanation, distribution and going through the questionnaire, the focus group itself, and the exit survey.

#### 4.4. Survey

The exit survey (Appendix I) was distributed to focus group participants prior to voting on the consolidated public transportation categories. As the researcher was primarily in the process of categorizing and reviewing the flip chart notes the research aide was available to answer any questions stemming from the exit survey.

The purpose of the exit survey was to look in detail at the demographic information and travel habits of the group to ensure the group contained representative qualities of a typical

older adults cohort in Winnipeg and if not, to address where substantial differences exist that may influence findings. All 10 surveys were completed and returned to the researcher.

#### 4.5. Coding the interviews & focus group

The researcher applied open, axial, and selective coding to both the interview and focus group phases of research as described by Neuman (2000). At the conclusion of both research phases the researcher transcribed and provided a first reading of the generated data. The transcribing for both research phases took some time allowing for reflection on the discussions both at the conclusion of each research phases as well as at various points during the transcription process.

The researcher condensed and categorized various concepts and ideas. The data was further evaluated and several themes were recognized and noted. The researcher went back to key relatable literature to look for accuracies and divergence between peer reviewed studies and the major themes and concepts of this practicum. For the interviews it was particularly interesting to note the depth in which some interview participants went to in answering specific questions. Others had limited experience in certain areas or no responses to questions. Throughout the open code of the interviews the researcher developed discrete themes that were based on individual understanding of participants to build a complete picture of funding and implementation of public transportation.

The axial reading of the interviews was challenging. The themes that were developed through open coding had considerable overlap with other themes due to the range of questions

asked. The complexity of the data was apparent and the researcher searched for higher, umbrella themes that still properly represented the data. The themes for axial coding better represented the political undertones of many of the interviews as well as the true complexity and outcomes of budget cycle and balancing of priorities when it comes to planning for positive public transportation outcomes for older adults.

For the focus group open coding the themes that emerged corresponded with the summarization during the focus group NGT voting. These themes were based on a shared understanding of public transportation barriers encountered by older adults.

Axial coding for the focus group allowed the researcher to take the static and insulated findings from the focus group and reorganize these into larger travel chain themes. Again the NGT played an importance in the axial coding as this allowed the researcher to assign weighting to larger concepts and themes as they emerged from the shared participant experience.

The coding of the exit survey was completed by using Microsoft Excel.

## **CHAPTER 5 ANALYSIS: PERSPECTIVES ON PUBLIC TRANSIT**

Chapter 5 consists of an analysis of the focus group discussion, the focus group exit survey, and the interviews with urban professionals. The data for each of these research phases was analyzed multiple times and coded into broad themes. For the focus group data, the travel chain barriers identified by participants were referenced back to the main theme of accessibility. Accessibility concerns were organized into three common areas – access to bus stops, access to information, and access to destinations.

The open and axial coding of the interviews with urban professionals provided a deep level of insight into many of the operations at the City of Winnipeg and how it affects public transit. To further refine the data each of these themes was relayed back to a specific research question.

The data analysis in Chapter 5 provides the backbone for the discussion in Chapter 6 and the recommendations in Chapter 7.

### **5.1. Defining focus group characteristics**

The purpose of the survey was to collect travel data and demographic information to better understand the results of the focus group. A copy of the survey is included in Appendix J. The survey results are graphed and discussed below in the order that the questions were posed in the survey.

All 10 focus group participants responded to the questions on age and gender. Figure 9 describes the age breakdown of the focus group participants. Based on the demographic data from Statistics Canada (2011) described in Chapter 3, the focus group participants in the 75-79 and 80-84 range were oversampled, while the 65-69 and 70-74 cohorts were under sampled. The 85+ category was also under sampled but not to a statistically significant degree. The focus group participants were generally older than an evenly distributed sample of older adults in Winnipeg. However, it is difficult to determine if this had any impact on the findings as physical and cognitive ability is individualized and questions were not asked on the health or participants.

**Figure 9 – Age of focus group participants**

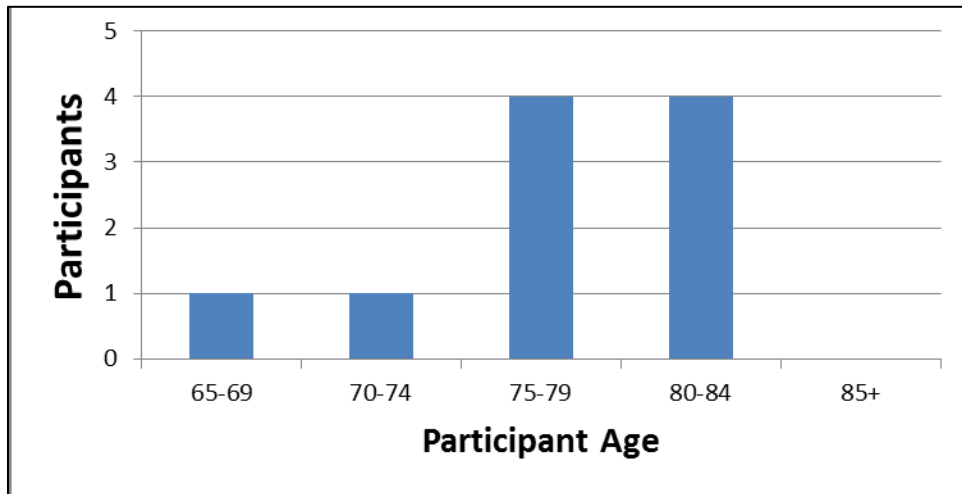
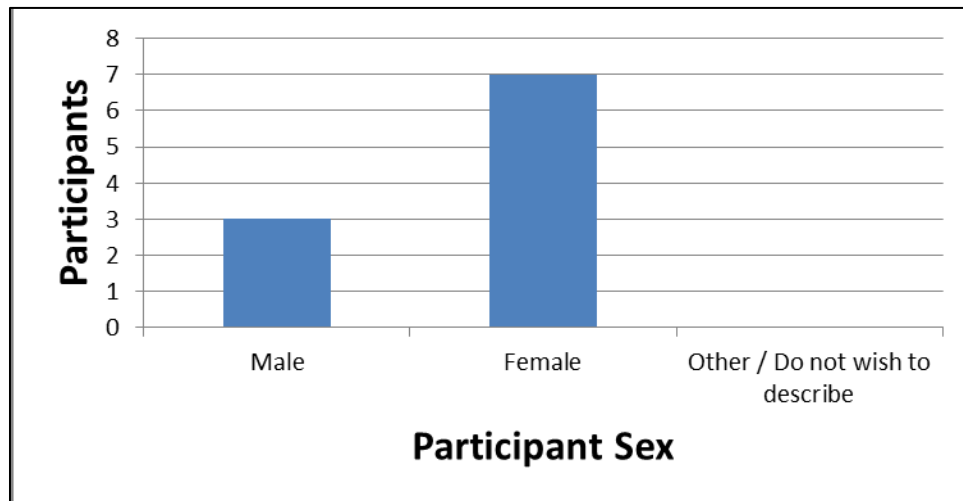


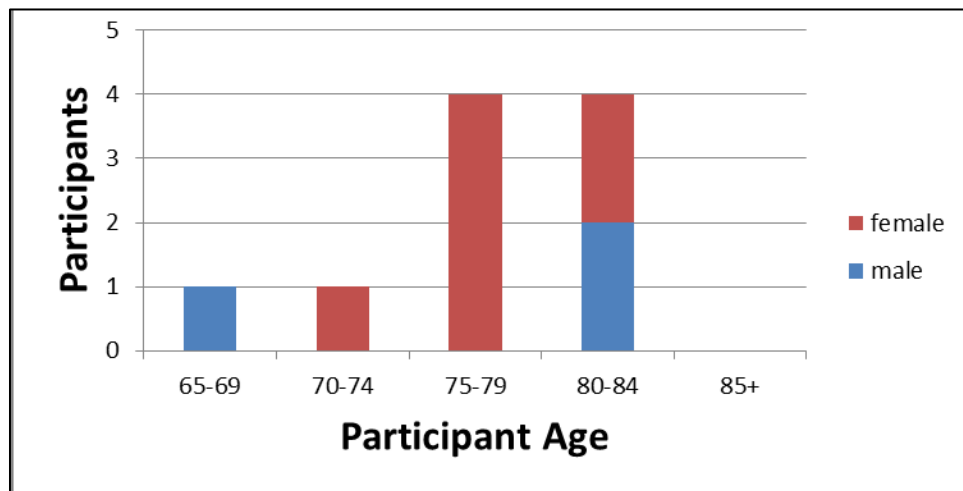
Figure 10 identifies that there were more than twice as many female participants in the focus group as male participants. Although there are more women 65 and older than men the oversampling of women is even more apparent by adding an overlay graph of age and gender

(Figure 11). Transit service and accessibility to transit is perceived and experienced differently by men and women.

**Figure 10 – Sex of focus group participants**



**Figure 11 – Age & gender comparison**

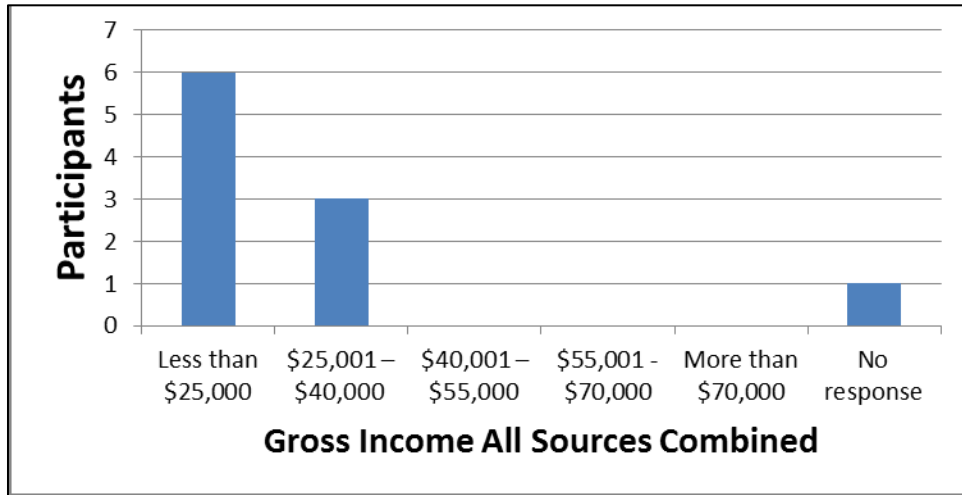


The average gross annual income for individuals 65 years of age or older in Winnipeg was \$29,661 (Statistics Canada, 2013). At least two-thirds of the focus group participants



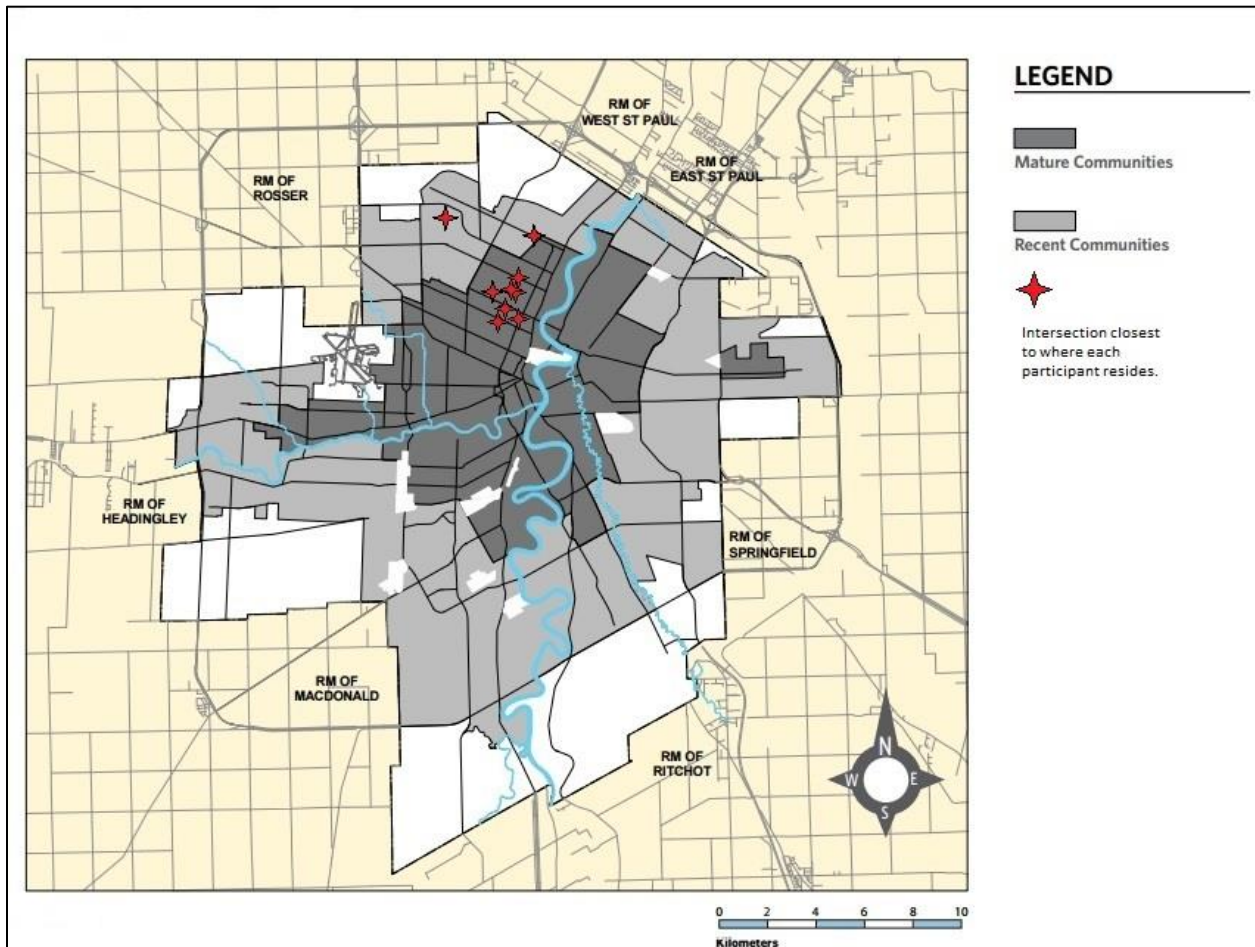
earned less than the average annual income for those 65 and older in Winnipeg (Figure 12). However, it is difficult to draw any direct comparisons. The purposive sample technique may have eliminated potential participants that would have allowed for a more representative distribution. The researcher was unable to locate any data on gross income of transit users in Winnipeg that could have been used for comparison.

**Figure 12 – Gross annual income of participants**



Participants were asked to identify the two roadways that intersect closest to where they live. This was done to protect the anonymity of those involved while still obtaining locational data from the participants. 9 of the 10 focus group participants responded to this question. The results of the question are mapped on Figure 13 below.

**Figure 13 – Focus group participant’s primary residence**



*Adapted from: The City of Winnipeg. (2011). OurWinnipeg Complete Communities*

7 of the 9 participants that responded to this question live in mature communities as outlined in OurWinnipeg. 1 of the respondents resides in a recent community, and 1 resides close to the transition boundary between mature and recent communities. This means that the focus group participants resided in predominantly more urban than suburban areas of the Winnipeg. The sample size was small and there was an unequal distribution of participants.

The barriers identified in the focus group are not representative of the experiences of all older adults in Winnipeg. The data does not allow for any comparison between urban and suburban barriers to public transit.

The remaining survey questions dealt with the topics of access to public transportation, how each participant uses public transportation, and the type of perceived transit service. The remaining data can be summarized as follows:

- 7 of the 10 participants identified that they use public transit for either all their needs or most of their needs.
- All 10 participants accessed bus stops by walking.
- 9 of the 10 participants used public transit for the primary purpose of accessing shopping centres / malls, or medical services, or both. Less frequent uses identified were to access professional services, downtown, or leisure services.
- The travel distance to a major destination where participants could access the most needed services used to answer the question described in the previous bullet point were perceived as 3 to 5 kilometers away (4 participants) or 6 to 10 kilometers away (3 participants). This means that a majority of the participants were not located near large-format retail or regional service centres.

Participants were asked to describe the length of their bus ride including wait times and transfers if applicable. The length in time for the bus ride to access these major destinations ranged from very short (less than 15 minutes) to more than an hour. Table 3 identifies that participant responses were evenly distributed in 15 minute intervals between these ranges.

**Table 3 – Travel time to major destination**

Travel time to access major destination described in previous question:	Number of respondents: (n = 10)
Less than 15 minutes	2
16 to 30 minutes	3
31 to 45 minutes	2
46 minutes to an hour	2
More than an hour	1

- 9 participants responded to the question on how many bus routes they were aware of that served their immediate area. Table 4 describes the results. The data provided by the participant’s in-line with the relatively urban breakdown of where participants live. Generally there are more routes servicing stops in urban areas than suburban areas.

**Table 4 – Number of bus routes servicing immediate area**

How many bus routes service your immediate area?	Number of respondents: (n = 9)
1 route	0
2 – 3 routes	5
4 – 5 routes	3
More than 5 routes	1

- 5 of the participants own a private vehicle. These 5 participants identified that they do not use their vehicle daily or for the majority of their needs. 4 of the 5 participants that own a private vehicle also indicated they made frequent use of transit for most of their

needs. The primary reasons why transit was selected by some participants over their private vehicle is discussed in Section 6.1.

- 1 participant sometimes relied on a volunteer driver and none of the participants cycle.

## 5.2. Focus group – open & axial coding

The coding for the focus group discussion was partially completed with the participants close to the conclusion of the focus group. As part of the Nominal Group Technique there was a prioritization and ranking phase with the participants (Table 5). The bias of the researcher was limited somewhat as the selection of these categories was immediately evaluated and added to by the focus group participants. This is a loose form of open coding and helps the group to identify the important topics. The categories selected as the most significant barriers to public transit by the focus group were as follows (in the order they were discussed, not ranked).

**Table 5 – Public transit barriers experienced by older adults:  
Chronological order**

Discussion Category	Highlighted Participant Comments
3-1-1 services	<i>I don't like the 3-1-1. Could a person answer and not put you on hold or transfer? Why do I have to be transferred?</i>
Wait times 15+ minutes	<i>Sometimes longer than half an hour.</i>
Narrow sidewalks or	<i>There are things in the way. I find bus stops difficult to get to.</i>

sidewalks in disrepair	<i>I've had trouble with sidewalks. They are difficult as there is not a sidewalk on both sides.</i>
Winter maintenance	<i>Even if it is plowed the windrow that the plow leaves behind makes it impossible to climb over. It's a real challenge for people with strollers or walkers or pushing wheelchairs.</i>  <i>It's a good thing I can see from my window. I've gone out when it's slippery and fallen. It was too slippery.</i>
Conflicts with bikers and skateboarders	<i>Cyclists are not supposed to ride on the sidewalk.</i>  <i>Vehicles or cyclists. They don't look for you. They don't see.</i>
Branding and visual barriers	<i>Why did they change the colour of the bus?</i>  <i>Yeah but we look and "here comes the bus... oh it's a van."</i>
Low frequency during the day	<i>Sometimes there's not enough of them during the day. Between 9 o'clock in the morning and 3 in the afternoon.</i>
Too busy or overcrowded	<i>Why do bus drivers allow four or five strollers on a bus? Some of them are so huge.</i>  <i>If we had more in the rush hours and in the afternoons then it wouldn't be so crowded.</i>
Misuse of priority seating	<i>The time they need more buses is when the school is finished. Like after school when the schools finish around 3 or 4 o'clock. Do you need an extra bus because it's just so packed sometimes.</i>

### 5.3. Nominal Group Technique summary

9 of the 10 focus group participants took part in the voting. Each of the participants was permitted to vote a total of 5 times thereby selecting what they believed to be the top 5 barriers that had an impact on their travel chain. 9 categories were developed from the focus group discussion. Table 6 describes the results ranked descending order.

**Table 6 – Public transit barriers experienced by older adults: NGT ranked**

<b>Rank</b> <b><u>T = tied</u></b>	<b>Identified Barrier Category</b>	<b>Number of Votes</b>
T-1	Wait times 15+ minutes	6/9
T-1	Low frequency during the day	6/9
T-1	Winter maintenance	6/9
T-1	Branding & visual barriers	6/9
5	311 services	5/9
6	Misuse of priority seating	4/9
T-7	Narrow sidewalks or disrepair	3/9
T-7	Too busy or overcrowded	3/9
9	Conflicts with bikes and skateboards	2/9

Wait times of 15 minutes or more, low frequency of transit during the day, winter maintenance, and branding & visual barriers all ranked high as two-thirds of participants chose to use one of their 5 votes on each of these 4 categories. Participants determined these 4 areas as the biggest barriers when using transit.

The long wait times and low frequency of transit are interrelated. Most of the participants used transit for mid-day or weekend trips. This is reinforced by the answers to the survey in which most participants utilized transit for medical services and shopping; activities that participants identified are usually outside of peak travel times. The primary service of transit in Winnipeg, as noted from the interviews with City of Winnipeg staff, is to serve commuters. The frequency of transit drops substantially mid-day and on weekends. Even though most of the participants lived in an urban area of Winnipeg, transit service, in the opinion of the participants, was not frequent enough.

Despite the focus group being hosted in August a consistent theme was winter maintenance. Snow clearing of sidewalks near intersections, general slippery sidewalks, and lack of snow clearing at bus shelters are a sampling of the comments. Participants in the interview research phase identified private contracted services regarding snow clearing at bus stops, shelters, and stations as an ongoing issue. This statement was reinforced by the focus group participants.

The theme of branding and visual barriers encompasses visual cues to recognize the bus and better branding on bus stops and stations, advertising issues, vehicle wraps, and visual disturbances such as dirty windows on a bus. All participants felt that transit has become less recognizable in Winnipeg even with improvements to light bars, bus LED display information, and electronic bus stop displays. Participants felt the reasons why transit is less recognizable is related to the change in colour of buses. Participants found the previous, bright orange buses, were more recognizable whereas the current white coloured bus fleet was difficult to spot



especially when operating along major truck routes. Participants often confused cube vans or transport trucks for transit buses.

#### 5.4. Focus group analysis – setting topics

The open code Nominal Group Technique themes were classified into higher order axial themes. Although the voting results provide some level of weighting this was not the only determinant of identifying the axial themes. Just as important was how the results relate to key literature, especially related to travel chains, referenced in the Chapter 2 as well as some of the main themes from the interviews with urban professionals discussed later in this chapter.

Focus group open and axial themes:

Focus Group - Open Coding (Emerging) Themes	Focus Group - Axial Coding Themes
<ul style="list-style-type: none"> <li>• <b>Misuse of priority seating</b></li> <li>• <b>Too busy or overcrowded</b></li> <li>• <b>Low frequency during the day</b></li> <li>• <b>Branding</b></li> <li>• <b>Conflicts with bikes and skateboards</b></li> <li>• <b>Winter maintenance</b></li> <li>• <b>Narrow sidewalks or disrepair</b></li> <li>• <b>Wait times 15+ minutes</b></li> <li>• <b>3-1-1 services</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Access to bus stops</b></li> <li>• <b>Access to information</b></li> <li>• <b>Access to destinations</b></li> </ul>

#### 5.5. Focus group principle theme – access to transportation

The general theme of the focus group was access to transportation. Many barriers were identified that would cause ‘strains’ or ‘breaks’ in the travel chain of older adults making transit

difficult to use. These travel chain topics can be organized into three specific areas: access to bus stops; access to information; and access to destinations. These three themes are discussed at length and referenced back to key literature in Chapter 6.

- **Access to bus stops**

The physical access to bus stops encompasses all of the built environment barriers that make accessing transit difficult for the focus group participants.

- **Access to information**

Access to information is any displayed or available information designed to facilitate the use of transit. Examples would be 3-1-1 services or route information at a bus stop.

- **Access to destinations**

Access to destinations is the ease or difficulty in completing trips that require the use of transit.

## 5.6. Urban professional interviews - open & axial coding

There were several repeated themes that cut across the interview questions. The open code themes were: colleague communication, network connections, transit performance, politics and strategy, and budgeting and finance (Table 7).

There were several overarching or bridging themes that were identified to capture both what was stated in the interviews as well as the underlying meaning as interpreted by the researcher. As axial coding relies more on the interpretation of the data than open coding it is important to recognize that the researcher's own values and understanding of public transit

provisions for older adults may have an impact on the identification of these axial themes. The literature selected, reviewed, and brought into the researcher’s understanding of this topic also had an impact on the development of these themes. The axial themes were a decision-making framework, financial balance, and transit integration.

**Table 7 – Interview open themes, axial themes, and research questions**

Interviews – Open Coding (Emerging) Themes	Interviews – Axial Coding Themes
<ul style="list-style-type: none"> <li>• <b>Colleague Communication</b></li> <li>• <b>Network Connections</b></li> <li>• <b>Transit Performance</b></li> <li>• <b>Politics &amp; Strategy</b></li> <li>• <b>Budgeting &amp; Finance</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Decision-Making Framework</b></li> <li>• <b>Financial Balance</b></li> <li>• <b>Transit Integration</b></li> </ul>



<b>Research Question Analysis (Topics)</b>
<ul style="list-style-type: none"> <li>• <b>How is public transit provided to older adults?</b></li> <li>• <b>How is transit prioritized and funded?</b></li> <li>• <b>How is transit improvements implemented, reviewed, and evaluated?</b></li> <li>• <b>What opportunities exist to improve accessibility?</b></li> <li>• <b>How can origins and destinations be better linked?</b></li> <li>• <b>What changes are needed?</b></li> </ul>

The data generated from the themes was referenced back to the original research questions. Table 7 below includes condensed forms of the key research questions for this practicum. The data from the interviews was developed around these topics.

## 5.7. Urban professional interviews – research question analysis

This section discusses the main topics covered during the interviews with urban professionals working for the City of Winnipeg. The goal was to answer some of the specific research questions and gain a more well-rounded understanding of how the city provides transit for older adults.

### 5.7.1 How is public transit provided to older adults?

There are a number of transit services provided by the City of Winnipeg – the most significant of which is the public bus transportation system managed by Winnipeg Transit. The bus system is fixed route and operates in a blend of direct and feeder-and-trunk routes. There is at least some level of service provided to every developed community in Winnipeg.

It was interesting to note that through each of the interviews there was only minimal information provided on transit planning with a specific lens looking to the needs of older adults. Some interview participant identified that there had been a sporadic focus on this topic but there is a ‘surge’ every once in a while from a councillor based on feedback from constituents.

*[Age-related transit improvements] come and go. I was looking through some of my files I've had here in the past and it looks like every so often there's a push to look at senior's issues and there be a study on it. But a*

*lot of this stuff will go, just be filed, away, there's some stuff in 2005.  
(Interview 1)*

*I don't, I think it would be fair to say at least in the last few elections in terms of what was being discussed heavily I don't think active again played, was very prominent. (Interview 3)*

Interview participants that work for the City of Winnipeg were of the position that transit is set-up to primarily serve AM/PM commuters. There was an acknowledgement from interview participants that because of the peak hour service goals of Winnipeg Transit there was less service during off-peak times. Interview participants felt that older adults would travel more at off-peak times.

*....older people that are retired and may not have the rush how peak demand that people who are still working in their careers do... we've tried to analyze ways in which we can fill in those gaps for someone that wants to take the bus in the afternoon can do so. (Interview 4)*

Through the course of the interviews there were a number of public transit improvements that were brought up as recent system improvements that have had a positive impact on reducing barriers to transit for older adults. Many of the high-profile more publically visible improvements to transit were highlighted as success stories. The transit improvements can be summarized as follows:

- Installation of tactile strips during intersection rehabilitation projects;
- Making strides to add more push-button activated heated seat bus shelter doors;
- A full fleet of low-floor buses with the ability to 'kneel', priority seating, and an access ramp;
- A reloadable tap fare card (Peggo);

- A more detailed bus driver training protocol on speed, turning, stopping, and starting, to reduce sudden and unexpected movements; and
- Improvements to access to information.

One interview participant summarized the improvements.

*I think it's been fairly obvious what Winnipeg Transit's done in terms of making their service so much more accessible in terms of the facilities and the vehicles they've used.... To me transit services has worked extremely hard at enhancing the accessibility of information about their servicing which is so important for an active, aging population. (Interview 3)*

Interview participants stated that many of the improvements to transit for older adults are part of department operating budgets. One interview participant indicated the inclusion of transit improvement in the operating budget is a result of demonstrated success to systematically reduce barriers to transit for older adults. The interview participant went on to state that a budget for the removal of barriers in an operating budget signifies a long-term commitment by Winnipeg Transit and council. The operating budget receives considerably less council scrutiny than the capital budget.

Public bus transit service is not the only service provided by the City of Winnipeg. Interview participants identified an opportunity to link and integrate public transit, handi-transit, and the DART. Some of the interview participants hinted at a historical divide whereby each system was treated as separate and distinct rather than complimentary to the overall public transit structure of Winnipeg. Although not stated there was a clear undertone in a couple of areas of a competitive atmosphere for limited resources.

*It's almost like its [handi-transit] own entirely separate entity..... it's not like there's animosity... it's just [handi-transit and public transit] are in different realms. There could be better communication certainly there's more senior's traveling. How do they decide to use a handi-transit trip or a regular transit trip? (Interview 1)*

Some interview participants identified that the different types of services are separate and complimentary, while another participant pointed to the need to “maximize the synergies” (interview 3) between the various transit services. There is a need for a more detailed understanding of functions between these those that manage these different transit services with the eye of improving transit services for older adults of all abilities.

#### 5.7.2 How is transit prioritized and funded?

General funding for public transit in Winnipeg comes from a mix of sources including transit fares, the Province of Manitoba through a cost sharing agreement, grants from the federal government through a number of different programs, municipal reserves, property tax levy, and other sources including advertisement. How to prioritize and allocate these funds is based largely on the City of Winnipeg annual capital and operating budget decisions. There is a noticeable absence of a council-directed strategic plan. These decisions are often based on reports, recommendations, and annual summaries submitted from city departments, subcommittees, or the executive branch of the City of Winnipeg. Finding the right balanced approach was a consistent theme in each interview.

The capital budget is passed annually by council and includes a four year projection. Interview participants highlighted several funded areas of the capital budget allocated to fix concerns with access to the public transit system. The discussed improvements and attached

funding were summarized earlier in this section. Interview participants identified that there has to be a balance struck between all of the priorities and the limited funding that is available.

Some of the interview participants identified that the lack of an adopted strategic plan by council creates somewhat of a moving target for priorities.

*All this to say that if there is not a formal strategic planning process there are still numerous formal opportunities for every single councillor to have their voice heard on issues. That doesn't necessarily translate into broad strategic issues. (Interview 4)*

*It might be better if there was a bit more prioritization. Say these are the key ones that might give us a bit more direction. (Interview 1)*

*"...I'm the new mayor, I'm the new councillor, I don't agree with this so we are going in a different direction." Which makes it extremely hard to carry out any long-term plan if the long-term plan is subject to being changed at any given point in time. (Interview 4)*

There is some consideration of older adults through the budgetary process. For example, annually, each department involved in providing direct services to the public, including transit, is asked to compile an annual report to give a "high-level cursory breakdown" (interview 2) of the universal design improvements completed for the year. This has a dual focus of providing the executive administrative level with an idea of how the approved capital and operating budgets directly feed into results as well as ensures compliance with the Accessibility for Manitobans Act.

### 5.7.3 How are transit improvements implemented, reviewed, and evaluated?

Transit improvements are implemented by providing an administrative report to council, a sub-committee, and/or through the budgeting process. Prioritization is largely



determined by each department unless council feels as though it has a specific mandate from the electorate to set direction. There are feedback mechanisms in order to evaluate transit improvements or justify a change in the level of service provided.

The city tracks ridership in great detail and adjusts transit operations accordingly. Though again, this is deigned mostly around commuters and Winnipeg Transit lacks the ability to track the use of specific demographic groups.

*[Winnipeg Transit tracks] detailed information. It doesn't distinguish between seniors and other demographic groups it looks as passenger volumes.... [Winnipeg Transit collects] data constantly and reports heavily on it four times a year so [they] know what the summer, winter, fall, and spring is like. Because we have different levels of service at different times of year... [Winnipeg Transit has been] talking internally and not just transit and transportation but other departments, the city having more dashboards and metrics on things so we know where the city is going and we know the quality of the services is constant or people are concerned about different issues. Having these dashboards and see how things are going at a glance. What kind of information the public, decision-makers, City Council, and use that when [the City of Winnipeg] is doing budgeting. (Interview 1)*

An unexpected comment that crossed interviews was the performance of private contracted services for snow clearing around transit stops.

*... [snow removal] has a major impact on those with mobility issues which include the elderly and just how transit fits into that and being able to make trips. As something we need to think about. (Interview 1)*

*Some groups have concerns with the private contractor model because of course once we do that [snow clearing] by contract we are demanding a certain level of service, certain behaviour, certain conduct, certain performance, and that's a little different than having a city employee directly accountable to the department. (Interview 4)*

*It was noted that stops weren't having enough attention paid to them. (Interview 1)*

The fact that the interview participants were aware of this and it was such an important topic to focus group participants (Section 5.2) indicates that there is a reliable public feedback mechanism though none of the interview participants were able to pinpoint exactly how the issue of private contractor snow clearing was originally raised.

#### 5.7.4 What opportunities exist to improve accessibility?

This research question was designed more to be answered through the focus groups but some interview participants did elaborate on potential improvements that could improve the accessibility of transit.

One interview participants identified that the public realm could be improved by providing better connections at various points in the travel chain.

*The other thing that we've heard I think from seniors is that they really need their route from their home to the bus stop to be much more accessible and easy to use. (Interview 2)*

*We need to push hard at the whole connection. Home, to transit, and then to destination, because it's all good and fine to have a good transportation system or transit system but if the route to that transit stop or to that destination is not good then it's not going to help. (Interview 2)*

This theme of taking a more holistic look at transit rather than at specific components of transit planning in isolation was confirmed by other interview participants. One interview participant identified that universal design and the systematic removal of barriers to transit needs to be a key component of project design in the early stages so that it is given careful consideration rather than tacked on in the end at the pre-construction phase.

### 5.7.5 How can origins and destinations be better linked?

Interview participant comments were in two specific areas: on how to provide a more robust network through better integration between public transit, handi-transit, and the DART system; and integration between land use and transportation planning.

From the perspective of some interview participants the DART system has been successful in filling a gap that would be difficult to service through regular public transit.

*DART is another one that they really really like because again you can call them [bus driver] and it's a feeder bus so it takes you from your local neighbourhood out to the main bus route. (Interview 2)*

Another interviewee commented on the misconception that this specialized service is more costly to operate.

*The DART systems, as it turns out, there's a tipping point where it becomes more expensive for certain levels of use. It can be equivalent [to the cost of public transit]. (Interview 1)*

Some interview participants indicated that a detailed evaluation of where the DART system could be increased in scope could better serve older adults. Participants considered enhancing the DART system as a way of providing option and opportunity to older adults. Participants routinely stressed the concept of building better connections between the DART system and regular public bus transit. To the knowledge of most of the interview participants such a study has not been completed.

As described in Section 1.6 Limitations and assumptions, the interconnectedness between public transit and land use planning is not the focus of this study. However the topic

did come up with most of the interview participants. Interview participants used the development of recent 55+ retirement facilities and assisted living facilities to illustrate their point. One participant commented that “...building senior’s homes and assisted living places way out in no-mans-land” (interview 2) with no access to shops or transit was detrimental to the health and wellbeing of older adults. Another participant, on the topic of transit and land use stated:

*I think we’ve been challenged to integrate the transportation and the land use planning... to really support a transit network that facilitates direct, convenient, travel. (Interview 3)*

There have been some positive changes recognized by a couple of participants.

*Just one example of that would be the zoning bylaw asked for a change to have a walking path in new developments, like a strip mall for example, from the public sidewalk and the transit stop in to a big box kind of development.” (Interview 2)*

*Development is starting to turn a corner in terms of recognizing the value of intensification along transit corridors and the value of transit access. But, so I think, for me I think that the most challenging piece that I think we are working towards is that land use piece that really needs to catch up. (Interview 3)*

#### 5.7.6 What changes are needed?

Interview participants described several areas where transit and transit related services could be improved to better service older adults.

One general area was on the topic of outward communication. Most interview participants recognized the need for improvement to public communication through 3-1-1

services, wayfinding, and better transit messaging at stops. This correlates with the travel chain barriers described by older adults in Section 6.1.

Communication channels with sub-committees were another area for improvement. One interview participant identified that sub-committees, especially those that deal with transit and aging issues, could be given a more specific mandate and additional administrative support. Some interview participants identified that they were only aware these committees exist but that the recommendations rarely filter into the budgetary cycle or are brought up when projects are designed.

Winnipeg appears to still be in the process of developing the framework in order to conduct a more detailed prioritization or analysis around the budget, major city strategies, and statutory documents. Even so, many of those interviewed indicate the city still has some ways to go.

*I think that's where the city is currently, with a pretty weak toolkit in terms of the tools we can use to advance some of those principles. That's where I think the challenge with implementation of OurWinnipeg and Complete Communities exists is we have the concepts and the vision articulated relatively well but the tools that allow us to actually implement those are relatively weak at this point. (Interview 3)*

*Mistakes are still being made with those guidelines. And there's also, it comes down a lot to the times to do the right thing. Following the guidelines can make it more expensive to do so it just doesn't get done. (Interview 1)*

Most participants saw it important to receive strategic direction from council on a more regular basis. Interestingly none of the implementation tools in any of the long-range planning documents such as OurWinnipeg Complete Communities were cited as providing enough

direction to move council's plans forward. However, it was noted that there is a perception that previous councils 'own' documents that were designed to ease concerns of the electorate at the time these documents were created and that subsequent council's feel very little pressure from administration or the public to continue on that trajectory.

## 5.8. Chapter summary

The intent of this chapter was to analysis the exit survey, focus group, and interviews to provide insight into the research questions. The exist survey data provided a deeper understanding of those that participated in the focus group. This data will be utilized in explaining the findings of this practicum. The focus group participants shed light on the barriers that they routinely encounter when accessing transit. The interview participants provided a well-rounded understanding of the operations of Winnipeg Transit and how the city prioritizes transit decisions. The overlaying theme of these research phases, when taken together, is that it is critically important for decision makers to understand all aspects of the travel chain of older adults. The coding, theme identification, and organization into broad concepts in this chapter provides adequate background to discuss the data and relate findings back to key literature. These details are fleshed out in the following chapter.

## **CHAPTER 6      DISCUSSION**

Chapter 6 builds on the analysis of Chapter 5 and provides further insight into the focus group and interviews. This section explores how focus group participant's access public transportation with findings referenced back to key literature. Some of the major themes of the interviews are revisited and cross-referenced with the data from the focus groups.

### **6.1.    Access to public transportation**

Access to public transportation was the overarching theme of the focus group. Participants framed access to transportation around three topic areas: access to bus stops; access to information; and access to destinations. This section explores and discusses these three areas in detail. Results are referenced back to key literature to explain similarities and divergences.

#### **6.1.1 Access to bus stops**

The physical access to bus stops encompasses all of the built environment barriers that make accessing transit difficult for the focus group participants. When looking at how older adults in this focus group described the built environment there was many similar experiences to those referenced in the literature. In several national studies summarized in Rosenbloom's 2009 study, lack of sidewalks on both sides of the road and pedestrian connectivity ranked highly as barriers to the travel chain and access to public transit and services. This is very much the findings of this research as well. Participants focused on this challenge when a sidewalk does not provide a direct route to a transit stop.

Other common barriers that were discussed by the focus group and were found to be similar in other studies were difficult pedestrian crossings, poor design of bus stops, and obstructions along pathways (Broome et al., 2010b; Michael et al., 2006). Crowded sidewalks near bus stops or misuse of sidewalks by cyclists were also viewed as barriers. Conflicts with other users such as cyclists were a major theme in other studies (Grant et al., 2010; Rosenbloom, 2009).

Poor weather conditions compound many of the access to bus stop issues. This was also found in other studies that identify that winter conditions can create particularly hostile environments for accessing transit (Grant et al., 2010). Focus group participants identified a number of concerns with winter conditions that made travel to bus stops difficult. Snow clearing around bus stops, at intersections, and poor sidewalk winter maintenance were the most common barriers encountered by the participants of this focus group. Several areas for further investigation are listed in Chapter 7 – Recommendations & conclusion.

### 6.1.2 Access to information

Based on the focus group discussion and the exit survey, focus group participants were well experienced transit users and could perform complex transit trips that involved multiple transfers. Focus group participants identified a lack of information provided through 3-1-1 services, confusing transit messaging on the front display of arriving buses, and inconsistent promotional information. Furthermore, unrecognizable signage at the less frequently used transit stops was also seen as a barrier. These stops sometimes consist only of a small sign and the route number. Some participants said audible stop announcements were not descriptive of



the transit stop or nearby destination and sometimes resulted in the user missing their stop. This corresponds with the findings in the literature. Access to information was seen as a barrier in the travel chain (Broome et al., 2010a; Broome et al., 2010b). Lack of prior experience was not evident with the older adults sampled in this practicum.

### 6.1.3 Access to destinations

Even though most of the participants resided in a relatively urban area of Winnipeg with above-average access to commercial services and a mix of land use districts most participants still identified that it was challenging to access many of the large format retailers and services that they frequented. Participants repeatedly identified having to go to destinations outside of their neighbourhood that would require long travel times during the mid-day low frequency bus period. In some cases transfers were necessary to reach destinations. In the four focus groups conducted by Grant and colleagues (2010) it was found that “not all desired destinations were located within a walkable distance. Although some neighbourhoods were more destination rich than others, participants in all neighbourhoods described having to reach destinations that lay beyond their neighbourhood” (Grant et al., 2010, p. 305).

Older adult participants in this practicum identified that their two main purposes for using the bus were shopping and to access medical services. This corresponds well with the findings of other literature that listed these areas as two of the top three uses of transit for older adults with visits to friends and family also a common purpose of using transit (Smith, 2001; Gant, 1997).

It is apparent from this focus group that land use remains an issue. Older adults do not always have the best access to major destinations or services even in an urban area.

Although the primary purpose of the focus groups was to identify shared experience barriers to public transportation, not all comments were negative. Participants identified several areas where they felt that Winnipeg Transit was providing adequate or exceptional service. Bus driver friendliness, timing between buses at transit stations when a transfer was required, taking transit to meet new people or spontaneous social interaction, and the bus being warm as opposed to waiting for a vehicle to warm up during the winter months were all cited as positives. Participants felt that most bus drivers were courteous and understanding of their particular needs.

## 6.2. Literature review comparison

Just as important as the main barriers identified by focus group participants is the barriers that the researcher expected to be highlighted that were absent from discussion. There were two key areas that came up relatively consistently in the literature that were not high-ranking topics or central to the discussion of this particular focus group.

First, there was a lack of discussion on crosswalks, roadway width, vehicle volumes, and vehicle speeds. The most relatable literature to this research was undertaken by Grant and colleagues (2010). One of the major findings of Grant and colleagues study was the difficulty in accessing public transportation because of roadway widths.

It was expected that similar results to the Grant study would come forward. All participants in this practicum's focus group reside in north Winnipeg west of the Red River. Of the 9 participants that responded to the focus group question on location, 7 participants reside in an urban area of Winnipeg. However, focus group participants did not note roadway widths as a concern. There were some instances where participants spoke on snow clearing and vehicles splashing pedestrians because of a lack of a buffer, but it was not a central component to any of the discussion. This may be a result of most of the busy arterial roadways (Main Street, McPhillips Street, and sections of Leila Street) located on the periphery of the area in which the focus group was held and where a majority of participants resided. Secondly, even though there were specific questions on accessibility issues and features of the bus, the focus group discussion quickly dismissed most of the concerns with the bus that were highlighted in other comparable literature. Relevant literature concluded that a lack of priority seating, limited use of low floor buses, misuse of priority seating, and narrow aisles were issues in other jurisdictions (Broome et al., 2008; Rosenbloom, 2009). Other than the misuse of priority seating discussed in Section 5.2 these were not concerns for the focus group participants in this study. This is likely a result of Winnipeg Transit's focus on decommissioning and replacing all less accessible buses through the revolving fleet procurement policy (Figure 14). Although Inkster Boulevard cuts through the centre of the area the wide median boulevard with a double row of trees may provide sufficient refuge when crossing (Figure 15).

Secondly, even though there were specific questions on accessibility issues and features of the bus, the focus group discussion quickly dismissed most of the concerns with the bus that were highlighted in other comparable literature. Relevant literature concluded that a lack of

priority seating, limited use of low floor buses, misuse of priority seating, and narrow aisles were issues in other jurisdictions (Broome et al., 2008; Rosenbloom, 2009). Other than the misuse of priority seating discussed in Section 5.2 these were not concerns for the focus group participants in this study. This is likely a result of Winnipeg Transit’s focus on decommissioning and replacing all less accessible buses through the revolving fleet procurement policy.

**Figure 14 – Regional and arterial roadways near focus group location**



*Adapted from: Google Maps. (2017). Map of regional and arterial roadways near focus group location. <https://www.google.ca/maps/@49.8534844,-97.4324102,10z>*

**Figure 15 – Inkster Boulevard**



### 6.3. Transit planning, funding, & prioritization

The discussion in this section is based on the interviews with urban professionals working for the City of Winnipeg. This discussion can be relayed back to several of the research questions in Chapter 1.

Interview participants highlighted internal communication as a strong positive aspect of public transit service level changes and enhancements, both between departments and among staff. The City of Winnipeg has a well-documented formal communication structure of which the Planning Executive Advisory Committee<sup>4</sup> (PEAC) is central. This committee is made up of many of the department heads which play a part in transit, stakeholders, and in some cases, even the decision-makers directly. There was an informal network of communication that grew and developed out of the formal committee structures that were in place. There was strong evidence of collaborative approaches to providing public transit.

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<sup>4</sup> The Planning Executive Advisory Committee (PEAC) was set-up to review new community and major redevelopment applications in the City of Winnipeg. The developer and city officials work collaboratively through the design, development, and decision-making process of the plan.

Improved communication with the public and older adults can enhance transit service. Interview participants recognized this and noted that in future years Winnipeg Transit will be placing a more important role on improving 3-1-1 services, wayfinding, and transit messaging. As is discussed in the previous section regarding the focus groups, consistent and user-friendly transit messaging, in various forms, was seen as a barrier to taking transit by the focus group participants. Public engagement on transit initiatives rarely directly targets older adults. There is a gap in communication and feedback between older adults and Winnipeg Transit.

The funding and resources allocated towards transit improvements follows department plans and operates within the scope of council approved capital and operating budgets. There are sufficient resources in place to engage with older adults in an open forum and address some of the barriers that older adults experience when using public transit.

With a lack of a council strategic plan that would give administration clear direction to follow the long-range planning abilities of Winnipeg Transit are limited. In many cases projects assigned to various departments are reactive to the needs of councillors as issues are brought up by the public. A more robust action plan is needed to better identify barriers to transit and ensure priority is placed on mitigating these barriers wherever possible. Focus group participants highlighted several access areas of concern that interrupted their ability to fully utilize public transit to meet their needs.

## **CHAPTER 7    RECOMMENDATIONS & CONCLUSION**

Chapter 7 brings together much of the literature, method design, data analysis, and discussion from the previous chapters. The chapter is organized to highlight several areas that should be considered for further investigation. Areas for further research are discussed as are considerations for the City of Winnipeg. Potential enhancements to public transit are organized into short, medium, and long-term improvements. Summarized in this chapter are the findings to answer the research questions and the travel chain barriers encountered by older adults.

### **7.1.    Recommendation for further research**

There are several areas that were noted thorough the literature review, research, and writing of this practicum as potential areas of further investigation.

The literature review revealed that there were few studies in Canada that looked at how older adults perceive and experience public transit by applying the Travel Chain Approach. As a result, most of the referenced literature is from Scandinavian countries and Australia. Additional Canadian research is required in other urban municipalities to further validate the findings of this research.

An interesting direction that is worthwhile exploring would be to hold a series of focus groups using similar methods of this study but focusing instead on comparing results from predominately urban and suburban locations. This may yield some interesting results in how different groups of older adults experience and use transit. As well, access to transit in urban

and suburban areas is vastly different and comparing the two areas may lead some interesting results in how the City of Winnipeg can plan transit for different land use and development patterns. How transit is perceived or how immigrants access transit is another potential avenue stemming from this research.

There is also an opportunity to conduct some ethnographic research. This could be set-up by either a researcher that uses transit or by involving a number of research participants that use transit to document their experiences. This could be accomplished through taking photographs, journaling or documenting experiences, or even interviews and surveys.

Quantitative research could also be pursued. For instance, spatial or geographic referencing could compare quite a bit of data that was outside the scope of this study. The interconnectedness between transit, bus stop locations, frequency of buses, land use, population density, route density, and demographics could be compared. This may lead to better understanding of the distance that older adults need to travel to get to the service centres. Long travel distances were frequently brought up in this research by participants and the methods by which they can accomplish such trips using transit.

Not all recommendations for further study need to be purely academic. The City of Winnipeg may want to look at developing a plan to host strategic planning sessions with a newly elected council to better flesh out some of the key issues that need to be addressed during the term. In order to set a process and agenda for adopting a city-wide vision and mission the documentation of key planning principles needs to occur with input from every department.



Winnipeg Transit can engage more frequently with older adults. This could either be through some of the existing committees or through the development of a communication plan that would help guide public engagement as part of new transit plans and initiatives. It is important not just to engage frequently with older adults, but all the groups that use transit services.

## 7.2. Answering the research questions

This section is intended to provide a concise summary of each of the research questions. It is important to note that the small sample size and other limitations previously discussed may have had an impact on these results.

**At the municipal level, what planning methods are employed to gauge how public transportation should be provided for older adults?**

Regarding the departments involved in the design and provision of transit, there was some evidence of strong inter-departmental collaboration and transit planning at the City of Winnipeg. However in some cases the lack of a strategic plan led to reactionary impulses to study specific aspects of transit with no real objective or goal. This results in poor partial implementation and ineffective monitoring. Without a set of “rules of engagement” between elected officials and department staff, councillors can bring concerns from their constituents straight to the providers of services; such as Winnipeg Transit. This causes department’s to put staff and financial resources into projects that they were not expecting to undertake.

- **How are results prioritized and funded?**

The urban professionals interviewed identified transit improvements are prioritized through department-level planning which is presented and worked into council's approved capital and operating budgets. Multiple public perspectives exist on what is considered an appropriate level of transit service and the financial impacts of providing that level of service. Interview participants noted that finding a balance between impacts on rate payers and the users of transit is important to successful operation of Winnipeg Transit.

- **How are identified improvements implemented and subsequently reviewed and evaluated?**

Implemented improvements are monitored primarily through data collection by Winnipeg Transit such as ridership data. There is limited specific collected data with respect to subsets of users such as older adult transit users. It is more challenging to collect demographic ridership data as the methods of doing so are intensive when compared to automated ridership counters.

**What are the specific barriers that deter older adults from using public transportation?**

Older adults identified that the specific barriers that are a detriment to public transit are a lack of sidewalks, poor condition of sidewalks, long wait times, difficulty in locating important transit information, infrequent service during daytime hours, visual barriers, and environmental conditions. These barriers cause breaks in the travel chain of older adult transit users.

- **How accessible is the current public transportation system for older adults?**

Focus group participants identified that overall the bus itself is mostly accessible with the exception of misuse of priority seating. Access to bus stops and access to information remain challenging. Winnipeg Transit's focus on improvements to the bus has been successful but additional focus needs to be given to all aspects of the trip.

- **What do older adults identify as the 'breaks' in the travel chain when linking origins with destinations?**

Older adults participating in this study identified that environmental conditions, distance to reach services, travel time to reach services, and missed stops resulting from unclear audible on the bus as the major breaks in the travel chain when linking origins and destinations.

- **What features of the public transportation system actually promote use and are identified as an advantage?**

Focus group participants identified bus driver friendliness, timing between buses when a transfer is required, and the accessibility of buses themselves as positive aspects of public transit use. There is also evidence that a strong driver training program has decreased the frequency of sudden starts, stops, and fast or tight turns.

**What opportunities exist to improve accessibility of public transportation systems for older adults?**

Improvements should be geared towards improving access to bus stops, access to information, and access to destinations. Some examples highlighted by the focus group participants were wayfinding, 3-1-1 services, transit branding, and other visual cues along the travel chain.

- **How can origins and destinations be better linked using public transportation?**

Greater integration between transit planning, land use planning, active transportation planning, and other strategic initiatives will improve links between origins and destinations. These documents need to be mutually supportive with a key eye to addressing known issues with public transit. Implementation should be consistently monitored.

- **What recommendations can be made for further study into how the city can implement long-term investment or re-prioritization?**

It is recommended that the city look for ways to bring strategic planning into early project design. It would be advantageous to explore ways to bridge the divide between different transit services (handi-transit, public transit, and DART).

### 7.3. Considerations for the City of Winnipeg

The following section offers considerations for further investigation by the City of Winnipeg. Considerations are organized into short (0-2 years), medium (3-4 years), and long-term (5+ years) improvements. This practicum did not sample a large enough population of older adults to provide any final recommendations. Rather, these comments are for the

potential interest of further study by the City of Winnipeg or other organizations. These comments could be used to supplement independent findings related to policy and implementation of structural improvements to either transit or operating procedures but should not be used exclusively so due to the small sample size.

### 7.3.1 Short-term (0-2 year) improvements

- Enhance bus recognisability

Focus group participants identified that the Winnipeg Transit bus fleet has become less recognizable – especially when operating in congested areas with lots of traffic. Participants stated that the reason for this was the colour scheme of the bus. The orange buses that were decommissioned due to the lack of accessibility features were deemed to be more recognizable than the current white fleet. Older adults said the current bus fleet can be confused for transport vehicles or cube vans. Winnipeg Transit should look specifically to the front of the bus which is the main visual cue for citizens waiting at a transit stop that a bus is approaching. The appearance should be enhanced to increase recognisability.

- Improve private contracted snow clearing

Winnipeg Transit should monitor snow clearing contracted services around bus stops. Interview and focus group participants highlighted this as an area of concern that was seen as a barrier to transit. If the areas around bus stops are not being cleared to the

standards of Winnipeg Transit or are not meeting the expectations of the public any outstanding concerns should be corrected by the contractor.

- Grow inter-departmental communication

The City of Winnipeg should continue to emphasize and grow inter-departmental work on transit projects. Some formal structure has been set-up to provide opportunities for input in the design and implementation of public transit. However, there remains room for improvement as some departments are not consulted with frequently enough or brought in early enough in the planning stages. In these instances, it is sometimes considered too late to shift course or make changes in the path forward. This can result in necessary improvements to transit being overlooked. Improving communication would ensure that multiple perspectives are voiced and transit improvements reduce barriers for older adults.

- Look beyond accessibility to the bus

Winnipeg Transit should recognize successes to-date that promote accessible transit. Focus group participants did not note significant physical concerns with the accessibility of buses. Winnipeg Transit should shift focus and resources to better connect origins with bus stops and improve transit information.

- Enhance the function of 3-1-1 services

Public transit users that rely on 3-1-1 services identified that the information provided is not always accurate or as descriptive as it could be when planning a trip. The City of Winnipeg should evaluate the effectiveness of 3-1-1 services and track user satisfaction

and performance. This could be accomplished through the development of key performance indicators and follow-up surveys. Focus group participants sometimes found 3-1-1 services difficult to use.

- Formalize the frequency of bus stops into a policy

Although there is no formal specification Winnipeg Transit designs transit stops with a range of 160-250 meters between stops unless conditions exist where this would not be feasible. This practice should be formalized into a policy. By formalizing the parameters into a policy Winnipeg Transit can consistently evaluate any new community developments for transit potential as well as identify gaps in the current system.

### 7.3.2 Medium-term (3-4 year) improvements

- Augment the role of committees

There are a number of committees of council that have a mandate to ensure the success of public transportation, finance, universal design, and implementation of aging policies in Winnipeg. These committees are sometimes left on the periphery of important decisions. Efforts should be made for administration to more directly liaise with these committees on relevant projects. Such activity would ensure buy-in and may cause re-examination of recommendations to meet the needs of the public.

- Promote transit service integration

The City of Winnipeg provides multiple types of transit service. Public transit, handi-transit, and dial-a-ride transit are the three services provided. Interview participants described the lack of integration between these three services – especially when it comes to trip planning. The City of Winnipeg should look for ways to promote the integration of these systems especially when it comes to trip planning. Some DART lines are set-up to provide service during reduced public use. Attention needs to be given to ridership to know how and when these lines need to be upgraded to provide additional service capacity or frequency.

- Recognize the importance of policy integration and implementation

To ensure the successful monitoring and implementation of key statutory documents (OurWinnipeg Complete Communities, & the Transportation Master Plan specifically) policies need to be mutually supportive. Interview participants described areas where the implementation of these plans is not consistent. Staff do not always have the resources to ensure the joint integration of these plans. The implementation of major city initiatives should be monitored and staff responsible for the implementation of these documents should work together to recognize the shared benefit a collaborative atmosphere provides.

- Consider DART expansion

Develop a plan for expanding dial-a-ride transit (DART). The cost of operating a DART bus is similar to that of a regular public transit bus. DART provides modified neighbourhood transit services to areas where Winnipeg Transit has deemed a



necessary during certain periods of the day. The separation between stops is minimized and therefore DART is seen as more accessible given the shortened distance of travel to a bus stop for users. This reduces the likelihood of barriers encountered in the travel chain of older adults. Interview participants flagged the success of the DART system and saw this as an area to provide additional types and levels of service to older adults.

- Develop high-use high-frequency transit corridors

The City of Winnipeg should identify key high-use corridors that operate near areas where a significant number of older adults reside. The goal would be to add additional mid-day services along these corridors. These high-use corridors could serve as a network backbone for more robust mid-day and weekend transit services. The older adults that participated in this study frequently used transit during off-peak periods. Adding greater frequency of buses during mid-day and weekend service along roadways that link origins with important destinations would reduce the travel time for older adults.

- Provide transit identification signage

Winnipeg Transit should develop a signage and transit identification program for less frequently used transit stops that only consist of a post with the route identification number. Focus group participants found some of these transit stops difficult to locate.

- Adopt a Council Strategic Plan

A strategic plan outlines the goals and objectives of a Council during their term and the process for action to meet milestones and targets. The City of Winnipeg does not

currently have a strategic plan. In the absence of a strategic plan, consider a strategic planning session or retreat for a newly elected council and senior members of administration. This would help to set clear political objectives and would provide additional guidance to departments. Long-term the City of Winnipeg should make efforts to adopt a strategic plan.

### 7.3.3 Long-term (5+ year) improvements

- Look to traffic calming and intersection modification

Develop a plan that would look at ways to modify intersections and improve pedestrian movements to transit stops. Some potential improvements include raised pavement markings, median islands, improved user-activated signal crossing devices, and enhanced signals. Other possibilities include adopting a traffic-calming policy that would focus on narrowing streets, lowering speed limits, and using traffic circles to slow traffic.

- Improve cycling infrastructure

Cycling improvements were not a direct part of this project. However, improving cycling infrastructure along high-use corridors would benefit not only cyclists, but would improve access to transit for older adults. If appropriate cycling facilities were provided (dedicated buffered lanes or pathways) so that cyclists do not feel so uncomfortable that they choose to use sidewalks it may lead to less use of sidewalks by cyclists. This is a win-win as it would not only improve the cyclist experience but would also help

mitigate the concerns brought up by focus group participants regarding improper and conflicting use of sidewalks.

- Create department desktop overviews

When a new council is elected, councillors have an extremely steep learning curve to understand municipal government and how and why services are provided to the public in certain ways. In very abrupt fashion, councillors have to switch from running on an election platform to governing by consensus. During this time, it is important for city departments that provide key public services, like Winnipeg Transit, to present or provide a desktop review to an incoming Council on major functions and initiatives. This would build an understanding of how financial resources and priorities are set within departments.

#### 7.4. Travel Chain Summary

Not all desired destinations are located within any given neighbourhood. The participants in this study frequently had to travel outside of their immediate area in order to obtain goods and services. For a trip to be successful using public transit a number of tasks must come together in a seamless travel chain. This practicum focused on the barriers encountered by older adults that caused 'breaks' in the travel chain. A close examination of these 'breaks' was completed by the researcher to look for opportunities to improve the overall quality of the trip. These recommendations are listed in Section 7.3 above.

Throughout the focus group, older adults continually brought up concerns while navigating the built environment to access bus stops, access information, and the ease or difficulty in completing the trip by accessing destinations. Other than the misuse of priority seating the accessibility of the bus was not deemed to be a major issue by focus group participants. Winnipeg Transit has made a number of enhancements to public transit buses to improve the quality of the trip. However, this effort needs to be adjusted to focus on making key improvement to the entire trip – including improving the built environment. For this to be successful detailed coordination is required with other departments on the City’s major initiatives. Public Works is responsible for roadway upgrades and Planning, Property, & Development is responsible for coordinating infill development and directing investment in communities. Winnipeg Transit must work closely with both of these departments in order to evaluate many of the considerations brought forward in this research project. Taking a more holistic view of the entire trip beyond the provision of transit itself will provide an opportunity to evaluate and mitigate the travel chain breaks experienced by older adults. The continual existence of barriers associated with access to public transit is a detriment to the quality of life of older adults and could lead to social isolation or premature institutionalization.

## 7.5. Closing thoughts

The demographic make-up of cities is changing and services like public transit have to adapt to a shifting composition of transit users. It is essential that public transit keep up with changing service demands in order provide equitable transportation options for citizens. The research questions for this practicum were developed on the basis of forwarding an

understanding of transit planning in Winnipeg – both from the perspective of those that design transit and older adults which may encounter barriers to using transit. The objective of this study was to evaluate how public transit is provided to older adults and how older adults regularly access public transit. This practicum is a culmination of an extensive literature review, method design, interviews, a focus group, and an exit survey to investigate these research questions. By applying several supporting approaches and techniques to understanding transit the researcher was able to explore how the City of Winnipeg prioritizes transit and how older adults experience transit. Specific breaks in the travel chain of older adults were explored and ranked by participants using the Nominal Group Technique. Although the sample size was small this provided an understanding of the barriers experienced by older adults and allowed the researcher to develop several recommendations for further investigation in order to clarify the findings of this practicum. Many of the findings were similar to that of comparable literature so there can be a degree of confidence in the considerations moving forward should a similar study be conducted with a larger sample size.

This research has expanded the understanding of the barriers to transit that interrupt the travel chain of older adults. There are few studies in Canada that have taken this approach. Generally, additional research that blends the Travel Chain Approach with the Nominal Group Technique is needed. Combining these methods provides a robust methodology that focuses on both the providers of transit and transit users. This offered an opportunity to compare and contrast different experiences, understandings, and perceptions of public transit in Winnipeg. To improve the function and resilience of transit services for older adults, Winnipeg Transit should review several key internal processes and considerations discussed in this research

project. Regardless of the methods selected, older adults have a role to play in key transit decisions and should be consulted with regularly. Public transit is a critical resource to uphold the quality of life of many older adult citizens. Shifting the paradigm at Winnipeg Transit to focus all aspects of the trip will lead to a better understanding of the barriers encountered by older adults accessing transit and provide opportunities to direct resources to mitigate these barriers.

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## **APPENDICES**

Appendices A – J commence on the next page.

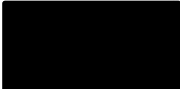
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# Appendix A: JREB Approval & Extension

 <b>UNIVERSITY OF MANITOBA</b>	<b>Research Ethics and Compliance</b> Office of the Vice-President (Research and International)	Human Ethics 208-194 Dafoe Road Winnipeg, MB Canada R3T 2N2 
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**APPROVAL CERTIFICATE**

April 21, 2016

**TO:** Aaron Leckie  Supervisor: Orly Linovski  
Principal Investigator

**FROM:** 

**Re:** Protocol #J2016:024 (HS19598)  
"Improving accessibility to transit: An examination of public transportation in Winnipeg, Manitoba"

---

Please be advised that your above-referenced protocol has received human ethics approval by the **Joint-Faculty Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement (2). This approval is valid for one year only and will expire on **April 21, 2017**.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

**Please note:**

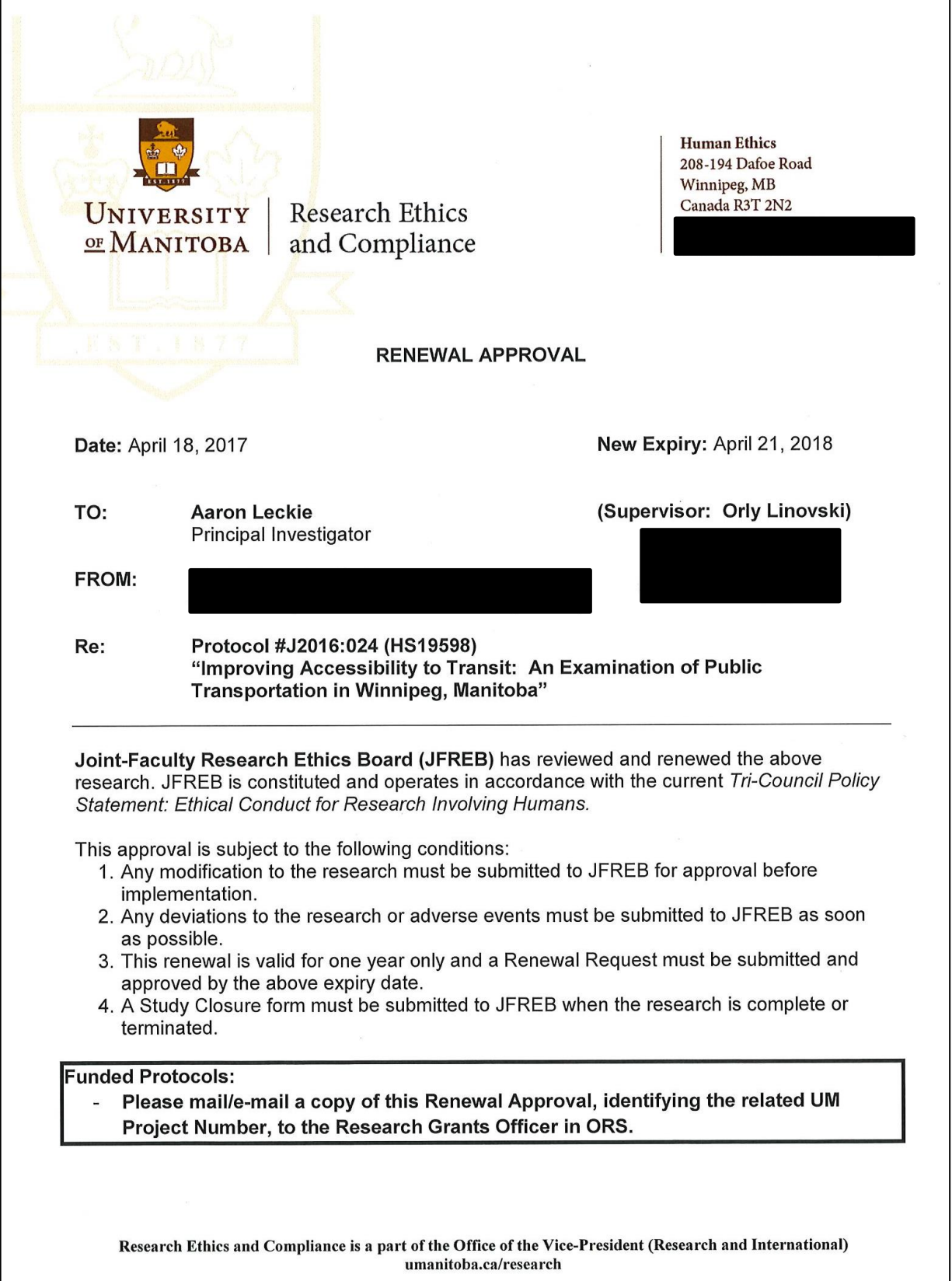
- If you have funds pending human ethics approval, please mail/e-mail/fax (261-0325) a copy of this Approval (identifying the related UM Project Number) to the Research Grants Officer in ORS in order to initiate fund setup. (How to find your UM Project Number: <http://umanitoba.ca/research/ors/mrt-faq.html#pr0>)
- if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.

The Research Quality Management Office may request to review research documentation from this project to demonstrate compliance with this approved protocol and the University of Manitoba *Ethics of Research Involving Humans*.

**The Research Ethics Board requests a final report for your study (available at: [http://umanitoba.ca/research/orec/ethics/human\\_ethics\\_REB\\_forms\\_guidelines.html](http://umanitoba.ca/research/orec/ethics/human_ethics_REB_forms_guidelines.html)) in order to be in compliance with Tri-Council Guidelines.**

umanitoba.ca/research





**RENEWAL APPROVAL**

**Date:** April 18, 2017

**New Expiry:** April 21, 2018

**TO:** Aaron Leckie  
Principal Investigator

**(Supervisor: Orly Linovski)**

**FROM:** 



**Re:** Protocol #J2016:024 (HS19598)  
"Improving Accessibility to Transit: An Examination of Public Transportation in Winnipeg, Manitoba"

**Joint-Faculty Research Ethics Board (JFREB)** has reviewed and renewed the above research. JFREB is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*.

This approval is subject to the following conditions:

1. Any modification to the research must be submitted to JFREB for approval before implementation.
2. Any deviations to the research or adverse events must be submitted to JFREB as soon as possible.
3. This renewal is valid for one year only and a Renewal Request must be submitted and approved by the above expiry date.
4. A Study Closure form must be submitted to JFREB when the research is complete or terminated.

**Funded Protocols:**

- Please mail/e-mail a copy of this Renewal Approval, identifying the related UM Project Number, to the Research Grants Officer in ORS.

## Appendix B: Interview Questions

### Interview Questions

*All interview questions have been listed here but each individual interview will only consist of the applicable position questions.*

Participation in this project is voluntary and you may decline to answer any question or withdraw from the study at any time without any negative consequences. The research process will conclude in August of 2016, and participants are free to withdraw at any time throughout the course of this research project.

General line of questions to be asked of all participants (30-40 minutes)

#### *External Forces*

- In what ways has the City, over the years, understood aging and planned for an aging community?
- How has the province's commitment to age-friendly cities effected how the business units operate at the city? What changes, if any, have come of this shift?
- How do you see the City continuing to adapt to changing demographics and demands for services (especially public transportation)?

#### *Internal Forces*

- What role have municipal politics played in shaping the discussion around active aging? Do you think sufficient attention is given to public transportation services for older adults? Why / why not?
- In what ways do long-range planning efforts and the vision for Winnipeg support reallocating resources as the demographics of Winnipeg continue to change? What are the areas that can be improved upon?

#### *Policy*

- What factors have fostered consensus-building among decision-makers to drive the Winnipeg age-friendly initiative?
- How effective has the City of Winnipeg's Accessibility Design Standards been in improving public places and access to transportation?

#### *Practice*

- In what ways do you feel that the current public transportation system serves the accessibility needs of older adults? Where are areas that can be improved?
- How has funding from other levels of government impacted the means in which the City is able to provide enhanced levels of service for older adults?

#### *Evaluation*

- What methods does the City currently utilize to monitor service enhancements in general (city-wide) and specifically (public transportation)?
- Where do you see the City of Winnipeg headed as a service provider for transportation for older adults? Do the vision and goals match the staffing resources available?
- How would you rate access through design to public transportation today compared to 10 years ago?

*Collaboration*

- What current projects are you working on with other departments that have an older adult component? How is knowledge shared among City staff and departments?
- Do you work with any community or stakeholder groups outside of the City of Winnipeg? If so, how would you describe their input in the planning process?
- Who do you communicate with on a regular basis? Whom else do I need to speak to?

Position specific questions (15-30 minutes)

- What outreach programs does the city currently utilize as feedback mechanisms to channel information and data about older adults? What happens with this information?
  - What age-friendly project and initiatives are currently being enhanced or reviewed? Are there any gaps that could be filled with new policy areas?
  - What type of resources does the city designate towards active transportation improvements? What are the sources of these resources?
  - How would you describe the use and accessibility of active transportation for older adults?
  - How has the implementation of city-wide plans changed how the City provides services to older adults?
- 

- What type of resources does the city designate towards public transportation improvements? What are the sources of these resources?
  - What strategic planning and budgeting processes are undertaken at the city to help to identify and evaluate the transportation needs of older adults? What sort of metrics are used in the design of the framework? Are there any performance indicators?
  - How are results prioritized and funded?
- 

- What are the driving principles that can be found in major planning documents?
  - How has the inter-relation between planning and land use helped to shape the understanding of the barriers that older adults face when using public transportation?
  - How has the implementation of city-wide plans changed how the City provides services to older adults?
- 

- What type of resources does the city designate towards public transportation improvements? What are the sources of these resources?
  - What framework exists to help implement public transportation improvements?
  - How would you describe the use and accessibility of public transportation for older adults?
  - In what ways has the composition, use, and ridership changed in recent years as a result of aging populations? What information is collected?
- 

- What outreach programs does the city currently utilize as feedback mechanisms to channel information and data about older adults? What happens with this information?
- What age-friendly project and initiatives are currently being enhanced or reviewed? Are there any gaps that could be filled with new policy areas?
- In what ways does your department help older adults succeed in the community?



## Appendix C: Email to Potential Interview Participants



UNIVERSITY  
OF MANITOBA

Department of  
City Planning

201 Russell Building  
84 Curry Place  
Winnipeg, Manitoba  
R3T 2N2

Hello,

My name is Aaron Leckie, and I am a Master of City Planning student at the University of Manitoba. I am currently completing my Master's Practicum entitled *Improving accessibility to transit: An examination of public transportation in Winnipeg, Manitoba*. My research supervisory is Dr. Orly Linovski. The focus of this research is three-fold: to understand the dynamics of transportation planning in Winnipeg and ultimately, how the City identifies, prioritizes, funds, implements, and evaluates public transportation enhancements for older adults; to identify the major barriers and breaks in the travel chain that older adults encounter when utilizing public transportation; and to make recommendations on how to adapt the public transportation system to make it more responsive to the needs of older adults – both short-term and long-term.

I would greatly appreciate your participation in an in-person interview to inform key components of my research. The interview will include roughly 20 questions and should take approximately 60 to 90 minutes to complete. The potential interview can take place at a time and location of your choosing. I am hoping to complete all interviews in a 3 day period between **May 24<sup>th</sup> and May 26<sup>th</sup>**. If you are interested in participating in this research project, please respond by phone or email as indicated below and I will be glad to send you additional information.

This research has been approved by the Joint-Faculty Research Ethics Board. If you have any concerns or complaints about this project, you may contact the Human Ethics Coordinator at [REDACTED] or email [REDACTED]

Thank you for your time and consideration,

Sincerely,

Aaron Leckie



Orly Linovski, Ph.D.  
Assistant Professor  
Department of City Planning  
Faculty of Architecture  
University of Manitoba



## Appendix D: Interview Protocol



UNIVERSITY  
OF MANITOBA

Department of  
City Planning

201 Russell Building  
84 Curry Place  
Winnipeg, Manitoba  
R3T 2N2

### Interview Protocol & Informed Consent Form

#### Master's Practicum – Department of City Planning

**Study Title:** *Improving accessibility to transit: An examination of public transportation in Winnipeg, Manitoba*

#### **Principal Investigator**

Aaron Leckie



#### **Supervisor**

Orly Linovski, Ph.D.  
Assistant Professor  
Department of City Planning  
Faculty of Architecture  
University of Manitoba



This consent form, a copy of which I will leave with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully.

#### **Project Description:**

An aging population of citizens will be a defining characteristic of Canadian demographics for at least the next 30 years. The convenience, reliability, and flexibility of transportation systems to meet new and changing demands will be an important issue as Canadian cities age. This research will blend approaches in urban planning, transportation planning, and gerontology to evaluate how public transportation is currently provided for older adults, and to understand the specific physical barriers that exist for older adults that utilize public transportation. The objective of this study is to provide evidence-based recommendations on how to improve the accessibility of the public transportation system in Winnipeg so that it is more responsive to the needs of older adult users.

In the course of the interview, I will ask questions about your experiences and perspectives related to how the City of Winnipeg has planned for an aging community and made transit provision decisions to serve this aging population.

#### **Location and Time Requirement:**

Participation will require approximately 60 to 90 minutes of your time and would take place on \_\_\_\_\_ at \_\_\_\_\_, in Winnipeg, Manitoba. I will request that you permit me to digitally record our conversation, but if you object I will transcribe it by hand.

I hereby provide consent to the researcher using a voice recorder for audio recording the interview.  
(Please indicate your preference).  Yes  No

Participation in this project is voluntary and you may decline to answer any question or withdraw from the study at any time without any negative consequences. The research process will conclude in September of 2016, and participants are free to withdraw at any time throughout the course of this research project.

**Confidentiality:**

As the research lead, I will keep any information gathered in this research strictly confidential throughout the course of this Master's Practicum. None of the questions posed by the researcher will be personal in nature. Only the researcher and research supervisor will have access to the data. I will send you a copy of the transcribed interview so you may correct or redact any statements including those that, in your opinion, may compromise your confidentiality. You will not be named or identified through any reports of this study. If any statement you made during this interview is used in a research report it will be attributed to an anonymous source. During transport, any documentation will be stored in a locked briefcase. Physical information will be stored by the researcher in a locked filing cabinet where only the researcher has access. Once transcribed, digital information will be saved in a password protected folder on the researcher's personal laptop. Information containing personal identifiers (e.g., this consent form) will be destroyed as soon as it is no longer necessary for scientific purposes, approximately September 2016. Interview transcripts will be deleted and/or destroyed by shredding once the project reaches its conclusion, approximately October 2016.

**Dissemination:**

A summary of the research findings will be provided to all those who participated in the study. The completed practicum will be made available in PDF format to all those who are interested in accessing the finished product. Following completion of the practicum and graduation from the program, the finished practicum will be available online through the Mspace function on the University of Manitoba Libraries website. Mspace is designed as a repository for research generated throughout the university and is available to professors, students, researchers, and staff throughout the university community. The researcher currently is not planning to publish or present these findings at a conference.

**Risks and Benefits:**

There are no expected risks to participants in this study. Subject matter is not controversial and does not deal with sensitive subject matter. Information will be kept confidential and names will not be used in the finished research paper. The potential benefits to you is the opportunity to reflect on and discuss the current framework in which the City of Winnipeg measures, prioritizes, and evaluates public transportation improvement for older adults with a specific focus on successes and opportunities.

**Consent:**


Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Should you wish to withdrawal from the study during the interview please bring this matter up at any time. Should you wish to withdrawal after the interview please contact me by phone or email listed on page 1. The final date of withdrawal is September 23<sup>rd</sup>, 2016. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.





# DO YOU RIDE THE BUS?

## Public Transportation



**UNIVERSITY  
OF MANITOBA**

**A study looking at improving accessibility to transit: an examination of public transportation in Winnipeg, Manitoba**

My name is Aaron Leckie and I am a Master in City Planning student at the University of Manitoba.

As part of my research, I am looking to hold a focus group session at **(name of facility)** on **(potential date/time)** or **(potential date/time)**. The session will take approximately 1 hour and 15 minutes of your time and includes a brief survey.


The goal is to build a shared experience among older adults that use public transportation in Winnipeg highlighting accessibility, barriers, concerns, and opportunities so that recommendations can be made to improve the overall system.

Criteria for participation in this focus group:

- 1) Each participant must be 65 years of age or older.
- 2) You must have, in the past, or currently utilize public transportation in Winnipeg.
- 3) Live near the area in which this poster is advertised.

This research has been approved by the Joint-Faculty Research Ethics Board. If you have any concerns or complaints about this project, you may contact the Human Ethics Coordinator at [REDACTED] or email [REDACTED]

**Please contact me by calling the number below prior to (date) or see the (resource staff) for additional information.**



<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>
<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>
<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>
<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>
<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>
<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>
<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>
<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>
<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>
<b>Please Take One</b>	Public Transit Study Contact: Aaron Leckie [REDACTED]	<b>Please Take One</b>



## Appendix F: Resource Staff FAQ

### **Resource Staff Frequently Asked Questions Submission**

#### *What is this research about?*

This research is intended to look at the barriers experienced by older adults when using public transportation. Everything from trip planning, to getting to the bus, to riding the bus, transferring, and eventually arriving at the destination will be looked at. The goal is to make recommendations to the City of Winnipeg to improve the bus system and make it easier for older adults to use.

#### *What is the participant criteria?*

The following 3 items are a list of criteria for involvement in the focus group.

1. Are you currently 65 year of age or older?
2. Do you currently or have you at any time in the past made use of public bus transportation in Winnipeg?
3. Do you live in the area?

#### *What is my \_\_\_\_ involvement in the research?*

I am a participant recruiter. The research is primarily conducted by Aaron Leckie, a student at the University of Manitoba, and his research advisory, Dr. Orly Linovski.

#### *What are the research components?*

The research consists of two major components, first, interviews with City of Winnipeg employees that work in the area of service delivery of public transit, and secondly, focus groups with older adults to understand their experiences in using transit supplemented with a brief survey. I am asking for your participation in the focus group and survey portion of this research.

#### *What am I expected to contribute?*

As a potential participant in this study, I want to briefly highlight what may be your involvement and contributions to the study. Focus groups were identified as an appropriate method of building a shared experience or understanding of public transportation for older adults in Winnipeg. The survey provides some additional general information about how you use and access public transportation to further explain results and findings. During the focus group, everyone will have an opportunity to speak about their experiences. A sheet with some general questions will be circulated to all participants that will form the basis of much of the group discussion.

#### *What is the format?*

All told, I will require 1 hour and 15 minutes of your time (plus travel time to and from the facility). One hour will be spent in the focus group and survey portions and 15 minutes will be spent completing the

informed consent form and answering any questions. The focus group will be held at the Ralph Brown Community Centre. The focus group will consist of between 8 – 10 participants all of which are older adults.

### *How is my confidentiality protected?*

Confidentiality is an important component of any directed research to ensure participants, like yourself, are comfortable in making statements based on your experiences. All focus group discussions and materials are to remain confidential – please do not share any of the information with outside sources as it has the potential to identify those involved.

As the research lead, Aaron Leckie will keep all information in this research strictly confidential. Only Aaron and Dr. Linovski will have access to the data. You will not be named or identified through any reports of this study. If any statement you made during this group session is used in a research report it will be from an anonymous source. Information will be stored by the researcher in a secure location where only the researcher has access. Information containing personal identifiers will be destroyed as soon as it is no longer necessary for research purposes - approximately October, 2016. Any notes will be deleted and/or destroyed by shredding one year after this project reaches its conclusion (approximately December, 2016).

### *What are the risks?*

The research has been identified as low risk and does not involve any physical or emotional harm or personal safety issues. None of the questions posed by the researcher are personal or deal with sensitive topics. The research is not misleading or deceitful. The information I am explaining to you is an accurate representation of the research.

### *What are some of the major highlights of this research?*

When you attend the meeting and after you have completed the consent forms and any consent-related questions have been answered; the format of the focus group consists of the following:

- A circulation of main questions to each participant. These questions are related to your typical travel patterns, and barriers you encounter, and use of public transportation.
- Welcome and introductions.
- Working through the circulated questions individually.
- Discussion of answers to each question within the group setting.
- I will be recording discussion on a flip chart and may prompt for further clarification or discussion.
- As key ideas emerge, there will be times when I will ask for a vote (show of hands) on a topic area. For example, “we’ve heard a lot about... (subject area) .... by a show of hands, how many people feel this is a key issue?”
- Prioritization of key areas from discussion so far.
- Another round of voting on priority areas and ranking of importance.

Throughout the process, there will be photo prompts as well. There will be an opportunity for final thoughts before the survey is circulated.

The research will conclude with a brief survey that will take no more than 10 minutes to complete. The survey contains general information about your transportation habits and how you use and access public transportation in Winnipeg. You are under no obligation to complete the survey. The survey will remain confidential.

*Is anyone else directly involved in the research?*

There also will be a research aide involved in the study. The role of the research aide is to take notes and help with overall organization of the focus group. The research aide will be expected to sign a confidentiality agreement prior to commencement of the research. The focus group discussion will be voice recorded to insure accuracy but not video recorded. Only I and the research supervisor, Dr. Linovski, will have access to this information.

*What if I want to withdraw?*

As the research lead, Aaron Leckie will keep all information in this research strictly confidential. The research aide will submit all notes to me at the end of the session. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence.

*Is there any compensation for involvement in this study?*

There will be no monetary compensation for participation in the research. Snacks and drinks will be available to participants.

*What if something comes up and I cannot attend?*

Should anything arise and you are unable to attend the focus group meeting or would like further clarification about this project, please let me [REDACTED] know as soon as possible by phone, email, or in person.

*Who approved this research?*

This research has been approved by the Human Ethics Board at the University of Manitoba. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator at [REDACTED] or e-mail [REDACTED]

# Appendix G: Research Aide Confidentiality Agreement



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Winnipeg, Manitoba  
R3T 2N2



## Pledge of Confidentiality

I, \_\_\_\_\_, agree to maintain full confidentiality of any and all research data received by me in the course of my involvement in the study entitled *Improving accessibility to transit: An examination of public transportation in Winnipeg, Manitoba*

Furthermore, I agree:

1. To hold in strictest confidence the identification of any individual(s) that may be revealed during the collection or handling of research data, or in any associated documents.
2. To store all research data and materials in a safe, secure location as long as they are in my possession.
3. To delete all electronic files containing data from my computer hard drive and any back-up devices after I no longer need this information as directed by the study principal investigator.
4. To destroy as confidential waste, any hardcopy research data in my possession after it is no longer required by me as directed by the study principal investigator.

I am aware that I can be held legally responsible for any breach of this confidentiality agreement, and for any harm incurred to individuals if I violate this agreement.

\_\_\_\_\_  
Research Aide's Signature

\_\_\_\_\_  
Study Principal Investigator's Signature

\_\_\_\_\_  
Research Aide's Name (printed)

\_\_\_\_\_  
Study Principal Investigator's Name (printed)

Date: \_\_\_\_\_

Date: \_\_\_\_\_



# Appendix H: Focus Group Informed Consent Form

Note: This form was developed using the Accessibility Initiative as a guide.



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## Focus Group Informed Consent Form

**Study Title:** Improving accessibility to transit: An examination of public transportation in Winnipeg, Manitoba

**Principal Investigator:**

Aaron Leckie



**Supervisor:**

Orly Linovski, Ph.D.  
Assistant Professor  
Department of City Planning  
Faculty of Architecture  
University of Manitoba



**Research Aide:** \_\_\_\_\_

### Introduction:

This project is a Master's Practicum in partial fulfilment of the Master in City Planning degree from the University of Manitoba.

This consent form, a copy of which I will leave with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully.

### Project Description:

The ability for public transportation to meet new and changing demands will be an important issue as demographics change and the population becomes older. The portion of the research which you are asked to be a part of involves determining the barriers that exist for older adults that use public transportation. I will use these findings to help make recommendations on how to improve public transportation in Winnipeg through the final report.

Note: This form was developed using the Accessibility Initiative as a guide.

First, there will be some brief introductions and an overview of the session so that we can understand the experiences that each participant is bringing to the group. This will be followed by a question & answer period using the questions attached to this form as a guide. The final component will include a review the main points we have heard and some additional discussion. We are working together to understand experiences in using public transportation in Winnipeg. Everyone will have the opportunity to speak.

**Location and Time Requirement:**

Participation will require approximately 60 minutes of your time and would take place on

\_\_\_\_\_ at \_\_\_\_\_, in \_\_\_\_\_

Winnipeg, Manitoba. The focus group will be recorded using a device. If you have concerns about recording the conversation at any time during the focus group process please let me know.

Participation in this project is voluntary and you may decline to answer any question or withdraw from the study at any time without any negative consequences. The research process will conclude in October of 2016, and participants are free to withdraw at any time throughout the course of this research project.

**Confidentiality:**

As the research lead, I will keep all information in this research strictly confidential. The research aide has signed a pledge of confidentiality and will submit all notes to me at the end of the session. Only the principal investigator and sponsor will have access to the data. You will not be named or identified through any reports of this study. If any statement you made during this group session is used in a research report it will be from an anonymous source. During transport, any documentation will be stored in a locked briefcase. Physical information will be stored by the researcher in a locked filing cabinet where only the researcher has access. Once transcribed, digital information will be saved in a password protected folder on the researcher's personal laptop. Information containing personal identifiers (e.g., this consent form) will be destroyed as soon as it is no longer necessary for research purposes - approximately September, 2016. Any notes will be deleted and/or destroyed by shredding one year after this project reaches its conclusion (approximately October, 2016). Please do not share any of the information with outside sources as it has the potential to identify those involved.

Note: This form was developed using the Accessibility Initiative as a guide.

**Dissemination:**

A summary of the research findings will be provided to all those who participated in the study. The completed research will be made available in digital or hard copy format to all those who are interested in accessing the final findings. Following completion of the practicum and graduation from the program, the finished practicum will be available online through the Mspace function on the University of Manitoba Libraries website. Mspace is designed as a repository for research generated throughout the university and is available to professors, students, researchers, and staff throughout the university community. The researcher currently is not planning to publish or present these findings at a conference.

**Risks and Benefits:**

There are no expected risks to participants in this study. The potential benefit to you is the knowledge that you have contributed to an important study that is aimed to help the City of Winnipeg understand the needs of older adults and plan public transportation accordingly.

**Withdrawal:**

You are free to withdraw from the study at any time, and/or refrain from answering any questions or participating in any specific component of the focus group without prejudice or consequence. Should you wish to withdrawal from the study during the focus group please approach the research aide or I. After the focus group should you like to withdrawal your participation you can do so by contacting Aaron Leckie by phone or email through the number and email provided at the top of page 1. The final date for withdrawal prior to defence of this practicum is September 23<sup>rd</sup>, 2016.

Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

**Consent:**

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities.





# Appendix I: Focus Group Survey



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Winnipeg, Manitoba  
R3T 2N2

## Focus Group Survey

**Study Title:** *Improving accessibility to transit: An examination of public transportation in Winnipeg, Manitoba*

**Principal Investigator:** Aaron Leckie

**Supervisor:** Dr. Orly Linovski – Department of City Planning

Participation in this survey is voluntary, and you can withdrawal from the survey at any time. Whether you participate or not will not affect your rights in any way. You will not be personally identified in any reports or communication resulting from this survey. There is no remuneration, payment, or credit associated with participating and there are no foreseeable risks. By participating in this survey, you indicate that you have understood to your satisfaction the information regarding participation in this project.

1) What is your age?

- a. 65-69
- b. 70-74
- c. 75-79
- d. 80-84
- e. 85+

2) I identify as a:

- a. Male
- b. Female
- c. Other / Do not wish to describe

3) What range best describes your gross annual income (all sources combined)?

- a. Less than \$25,000
- b. \$25,001 – \$40,000
- c. \$40,001 – \$55,000
- d. \$55,001 - \$70,000
- e. More than \$70,000

4) What two roadways intersect the closest to where you live?

\_\_\_\_\_ and \_\_\_\_\_

5) How often do you use public transportation?

- a. For all of my needs
- b. For most of my needs
- c. For some of my needs
- d. Not very frequently
- e. Rarely, or on an emergency basis only
- f. I have not used public transit in more than 2 years

6) If you currently use public transportation, how do you typically get to the bus stop / station?

- a. By foot
- b. Cycling
- c. Power or manual wheelchair or electric scooter
- d. Calling / using the Dial-A-Ride-Transit (DART) service
- e. Ride to stop or station from friends / family / volunteer
- f. Other (please describe below)

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7) If you currently use public transportation, what major destinations do you access? (E.g. malls, professional offices, medical services, grocery stores. Please describe)

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8) On average, what is the travel distance to the major destination where you can access most of the services you need?

- a. Less than 2 kilometers
- b. 3 to 5 kilometers
- c. 6 to 10 kilometers
- d. More than 10 kilometers

9) How long is the bus ride to the major destination that you used to answer question 5? Please include all transfers and wait times as applicable.

- a. Less than 15 minutes
- b. 16 to 30 minutes
- c. 31 to 45 minutes
- d. 46 minutes to an hour
- e. More than an hour

10) To the best of your knowledge, how many bus routes service your immediate area?

- a. 1 route
- b. 2 – 3 routes
- c. 4 – 5 routes
- d. More than 5 routes

11) Do you own a private vehicle?

- a. Yes
- b. No

12) If you own a private vehicle, how often do you drive per week?

- a. Less than once a week
- b. 1 – 5 times a week
- c. 6 – 10 times a week
- d. More than 10 times a week
- e. Not applicable

13) What, if any, other forms of transportation do you use (e.g. bike or electric scooter)?

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This concludes the survey. Thank you for your participation.

## Appendix J: Focus Group Questions

Note: This form was developed using the Accessibility Initiative as a guide.



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### Focus Group Questions

- How do you typically plan a bus trip?
- How far do you have to travel to get to the closest stop or station? How long does this take you?
- Is it direct access or a complex route to get to the stop or station?
- Are there sidewalks on both sides of the street? Are the sidewalks wide enough and in a reasonable state of repair?
- Have you ever had a concern about someone else using the walkway?
- How do you feel about the quality and state of repair of infrastructure around a bus stop or station?
- How frequent does the bus you are waiting for come by the stop? How reliable is the bus?
- Are the buses fairly consistent or do you notice some differences in quality? What accessible features do you like about some buses that others do not have?

Note: This form was developed using the Accessibility Initiative as a guide.

- Are there any features on the bus that make it easy to determine where you are on your route?
- How would you rate the quality of the trip on the bus?
- Does the bus take you where you want to go or do you have to transfer? How is the transfer?
- Is it quite a distance or fairly close to where you would like to go from where the bus drops you off?
- What do you see are the main barriers that make public transportation challenging in Winnipeg?
- What are some of the positive aspects of riding the bus? What are the successes of the bus system?
- What has your experience been like using public transportation in the winter?