

**Exploring the Relationship between Commuting and
the Exurban Community:**

A Case Study of Niverville, Manitoba

By Ellen Enns

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Department of City Planning
Faculty of Architecture
University of Manitoba
Winnipeg

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ABSTRACT

Traditional methods of studying commute patterns consist of calculating the distance between residential and work locations and the duration of travel. Recent methods however, have shifted to include information regarding the choices people make for their daily commute and what influences them to make these decisions. Analyzing the commute itself is not sufficient anymore, as individual preferences for a particular community, or lifestyle, largely influences a persons' commute.

This research is a case study of Niverville Manitoba – a small town that can be characterized as an exurban community. Niverville represents a growing preference for a particular lifestyle that is perceived as inducing longer commuting distances for its residents. As populations' increase in exurban communities, it raises questions as to why people desire to live there and if their commutes are as long as perceived. This investigation will consist of collecting information on people's commuting patterns, preferences for exurban living and how their households made decisions on where to live and how to commute.

Keywords: [Exurban, Exurbanite, Community, Commuting, Niverville]

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1.0 INTRODUCTION

The Town of Niverville can be classified as an exurban small town, which is a small town located within an appropriate commuting distance to a large urban center. Evidence is indicating that Niverville residents are commuting to work locations outside of Winnipeg, signifying the increasing complexity of commuting patterns amongst exurban residents. This practicum studies this phenomenon by exploring the relationship between how Niverville residents commute and why they chose to live in Niverville.

1.1 Problem statement and research questions

The increasing amount of individuals residing in exurban developments signifies “the continued preference for low-density living” (Fuguitt & Brown, 1990; as cited in Fuguitt, 1991, p. 465). As exurban developments become more desirable, there is an assumption that individuals living in these areas are commuting greater distances as they reside further from large employment centers in urban areas. However, as employment opportunities are increasing in exurban regions, living in these areas may decrease the commutes for some, in addition to creating various commuting patterns (Green & Meyer, 1997, p. 163). While commuting patterns have conventionally shown travel paths moving in and out of a city’s central core, exurban travel research has experienced a more complex network of behaviour including individuals commuting to nearby towns (rural to rural commuting), office parks of a city suburb (rural to urban commuting), or working in the town where they live (intra-rural commuting) (Green & Meyer, 1997, p. 168). These answers cannot be conceptualized through commuting data alone and transportation

research needs to explore the social reasons behind people's preferences for a specific neighbourhood type, such as exurban developments.

This practicum explores resident commuting patterns, preferences for living in Niverville and how households made decisions on location and commuting choices. I aimed to address these topics by answering the following research questions:

- 1. What are the commuting patterns of residents in Niverville?**
- 2. What are the perceived benefits of living in Niverville?**
- 3. How do residents aim at balancing decisions about commuting and neighbourhood choice?**

These questions aim to prove the 3 hypotheses of this research: (1) Niverville residents are commuting to work locations outside of Winnipeg as they are not solely reliant on Winnipeg as an employment center and because of this, may have a shorter commute time than is often perceived, (2) Residents live in Niverville as it represents a modified version of "rural/country" living with the added benefit of affordable housing and a good community atmosphere and (3) Households justify the time spent on a longer commute (if commutes are long) in order to live in Niverville.

The findings of this practicum were informed by census information of Niverville population and demographics, land use and built form analysis of Niverville and a resident survey that gathered information on where individuals work, how they commute and what decisions their households made on where to live and how to commute.

1.2 Research objectives and significance

Studying commuting patterns is a complex problem for transportation and planning research due to the growth of communities outside a city. According to Fuguitt (1991), in rural and exurban areas, little is known about the relationship between commuting and settlement structure (p. 459). Studying the spatial component of a commuting pattern is no longer sufficient to determine why people commute the way they do, as several other factors, including choice of residence, greatly affects a commuting pattern.

Rural commuting studies have become increasingly significant in determining infrastructure investments for exurban areas. Planning for rapidly growing communities, such as Niverville, can burden planners, politicians and their resources (Fuguitt, 1991, p. 465). Supporting planning practice and research in small towns, as well as understanding the choices motivating residential lifestyles, is important for future land use and transportation planning. Exurban towns have a larger influence on a city, and a region, than is perceived, and the interconnectedness is often forgotten in planning jurisdictions. This research has the potential to become a precedent for similar communities and supports the development of a social centric planning framework.

This case study explores the relationship between commuting and the exurban community through the social inquiry of local residents in Niverville. Gathering the preferences that informed residents' decisions regarding housing and transportation choices, may be useful in developing future local and regional development plans. This case study has increased the amount of qualitative data for commuting and exurban small town research, and has produced generalizations that can be applied to transportation and exurban theory, as well as practice.

1.3 Document structure

This practicum begins with an introduction to the context of the research by describing the Town of Niverville, the history of its built form and land use, as well as Niverville's census information on population, demographics and commuting flow. Following this is a literature review of exurban developments and various topics in commuting, as well as a chapter focusing on the research methods used to answer the research questions of this practicum.

The research findings will then be discussed, which includes gathered information pertaining to household characteristics and preferences for living in Niverville, as well as commuting characteristics of work location, commute mode, commute time and enjoyment of commute. Open-ended information reveals respondent's opinions on their commute, how their commute has been affected upon moving to Niverville, how their households made decisions on where to live and how to commute and if they would ever consider moving closer to their work location.

The analysis of the findings will explore the effects that work location has on commute time, commute mode, level of commute enjoyment and preferences for living in Niverville. The effects of how long a resident has lived in Niverville will be evaluated with residents preferences for living in Niverville as well as their willingness to move closer to their work location. Lastly, the influence of work location, household size and number of household workers will be evaluated with how households made decisions on where to live and how to commute.

Finally, conclusions will be drawn from the findings and analysis to answer the research questions regarding commuting patterns, preferences for living in Niverville and

how households make decisions on where to live and how to commute. Implications for the exurban community, exurban commute and the relationship between the exurban community and commute will be presented as well as the implications for planning practice and opportunities for further research.

2.0 CONTEXT

The Town of Niverville is located approximately 30 kilometers south of Winnipeg, in the Eastman Region of Manitoba. The current land area is 8.7 km² with a

population density of 530.6 per km² (Statistics Canada, 2016 Census of Population). Between 2006 and 2011, it was one of the fastest growing towns in Manitoba, with a population increase of 43.7% (Statistics Canada, 2011 National Housing Survey). In 2016, Niverville’s population change from 2011 had decreased, however the percentage of population aged 0 – 14 years had increased, signifying a higher number of children and young families compared to Winnipeg and Manitoba (See Table 2.1).

Table 2.1: Population and demographics, 2011 and 2016 Census programs

2011 National Housing Survey			
	Population change (%) (From 2006 to 2011)	Median age of population	Population 0 – 14 years (%)
Niverville (T)	43.7%	30.9	27.8%
Winnipeg (CY)	4.8%	39.0	16.9%
Manitoba	5.2%	38.4	19.1%
2016 Census Program			
	Population change (%) (From 2011 to 2016)	Median age of population	Population 0 – 14 years old
Niverville (T)	30.2%	31.6	28.5%
Winnipeg (CY)	6.3%	38.8	16.8%
Manitoba	5.8%	38.3	19.1%

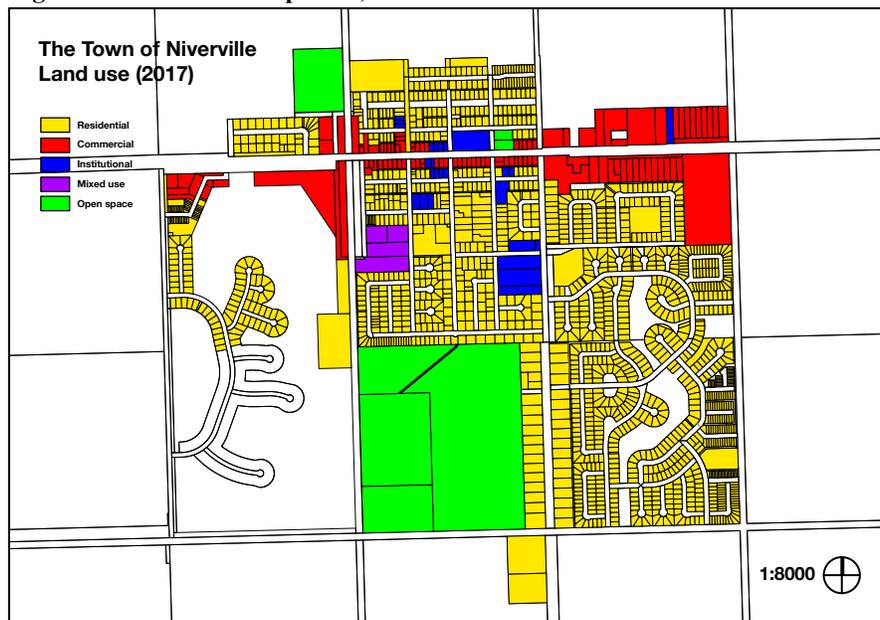
Source: Statistics Canada, 2011 National Housing Survey & 2016 Census of Population

This chapter will outline Niverville’s current land uses, built form history and the existing commuting conditions that render it an appropriate subject for this case study.

2.1 Current land use

Niverville’s land use is typical of a small town – A main street containing the central commercial area, separated residential areas and patches of open space. The institutional land uses consist mostly of churches and educational facilities. The one large mixed-use facility is the Niverville Heritage Centre, “a not-for-profit community owner corporation that is over 14,000 square feet in size” (Niverville Heritage Holdings Inc., 2017). The development contains an event centre, Niverville Primary Healthcare Centre, Niverville Medical Clinic, Niverville Heritage Dental Care, Growing Minds Child Care Centre, Heritage Life Retirement Living (46 suite life lease residence for 65 years of age and older), Heritage Life Personal Care Home (80 residents), Niverville Credit Union Manor (36 suite Assisted Living and Supportive Care residence) and Hespeler’s Cookhouse and Tavern (Niverville Heritage Holdings Inc., 2017). The south side of Main Street contains the majority of residences in Niverville, as well as a large open space with walking trails (See Figure 2.1).

Figure 2.1: Land use map 2017, The Town of Niverville



Source: Manitoba Land Initiative, 2015

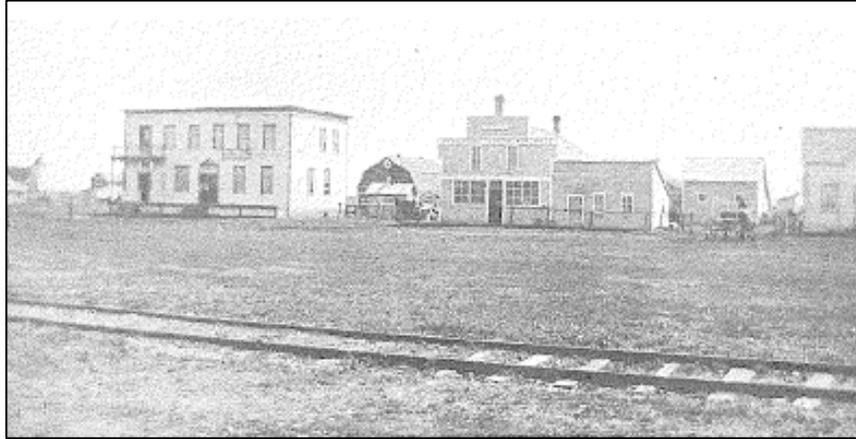
2.2 History of Niverville

Niverville was officially founded in 1874 when William Hespeler brought several Mennonite families to farm the area (Niverville District Historical Society, 1986, p. 23). The village of Niverville was named after Chevalier Joseph Boucher de Niverville, “an officer in the company of Ledgardeir of St. Pierce who succeeded La Verendrye as commander of France’s western trading posts.” (Warkentin, 1971, p. 350). Hespeler acquired the townsite of Niverville in 1878 in the interest of developing it into a rail centre (Warkentin, 1971, p. 350). By 1888, Niverville contained a railway station, telegraph office, a general store, a post office, a hotel and Western Canada’s first grain elevator (Niverville District Historical Society, 1986, p.i).

2.2.1 Early years: 1878-1920

Hespeler’s original plan for Niverville was twice as large as it’s current size, with plans for a park, a cemetery and a large market place (Warkentin, 1971, p. 355). There have been several speculations as to why Niverville’s development was not as robust as Hespeler had originally planned. The wet years, between 1878 and 1882, had caused farmers and traders to operate out of the West Reserve (area West of the Red River near Niverville), moving business out of Niverville (Warkentin, 1971, p. 355). Winnipeg was also a dominant and growing metropolis at the time and more trade was directed into the City than to outside areas (Warkentin, 1971, p. 355). It was not until after the year 1900 that Niverville began to attract more people with the construction of new roads and infrastructure (Warkentin, 1971, p. 355).

Figure 2.2: Niverville’s business area showing old hotel and the general store (1900)



Source: Warkentin, A. (1971) *Reflections on our heritage: A history of Steinbach and the R.M. of Hanover from 1874*

2.2.2 Post-war growth

The post-war period was a time of great growth for Niverville. New local businesses had been developed, including a credit union and the formation of the Niverville Chamber of Commerce that aided in several local economic endeavours (Warkentin, 1971, p. 356). William Dyck became Niverville's "Hespeler" of the post-war period, engaging in several business projects, including a very successful chicken hatchery and later expanding into the hardware business (Warkentin, 1971, p. 356). Niverville was also diversifying its industrial character, with industries in grain, livestock, sugar beets, milk and honey (Warkentin, 1971, p. 356).

Figure 2.3: Area view of Niverville looking northeast



Source: Town of Niverville (contributed by Tina Froese), c.1950

2.2.3 From settlement to village: 1969-1986

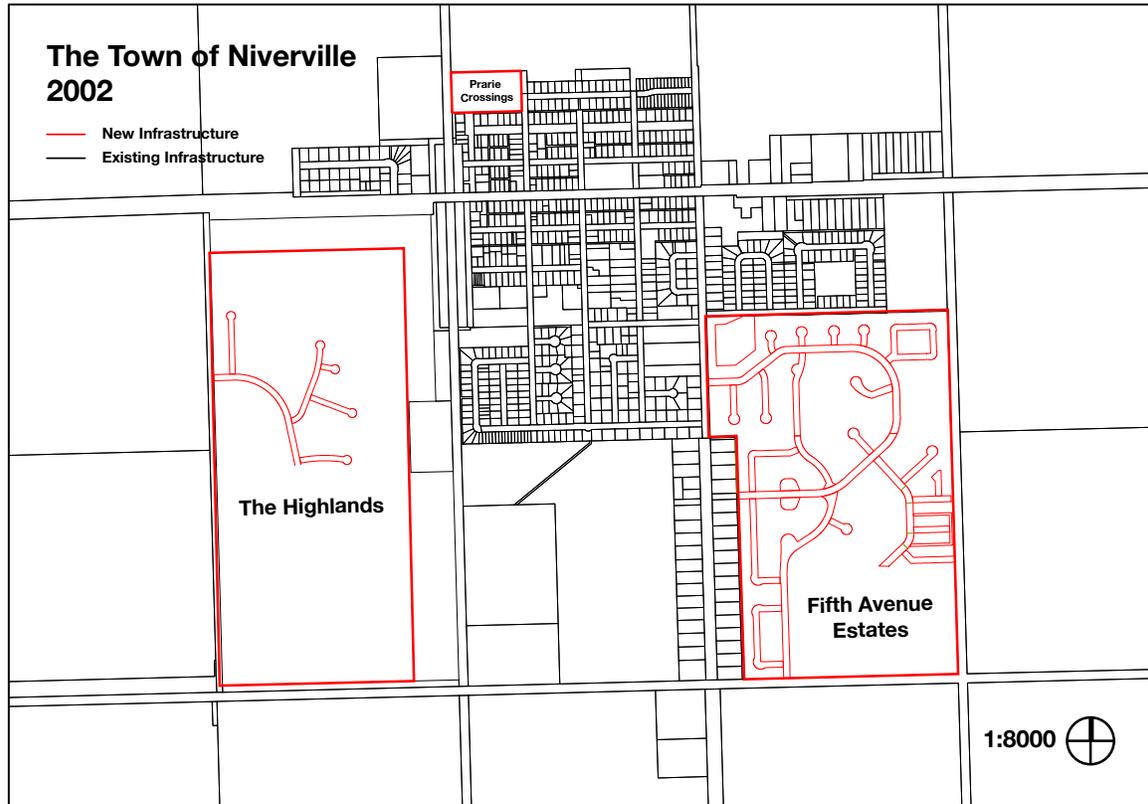
Niverville was incorporated as a village in January of 1969. The village had the capacity to create a self-governing council that was able to collect its own taxes (Warkentin, 1971, p. 357). In 1970, Niverville installed a gravity sewer system to upgrade the existing infrastructure under the new “Manitoba Main Street Program”, which also aided in the construction of new sidewalks, street trees and lighting (Niverville District Historical Society, 1986, p. 25). At this time Niverville had educational facilities from kindergarten to grade 12, 2 grocery stores, recreation centres, a repair shop, 3 cafes, a volunteer fire department, a bank, a hair dresser and barber, 2 feed mills and a concrete plant (Niverville District Historical Society, 1986, p.i).

2.2.4 Recent history: 1993 – present

In 1993, Niverville was officially incorporated as a Town. It grew steadily throughout the 1990’s and early 2000’s, with a large population growth of 43.7% between 2006 and 2011 (Statistics Canada, 2011 National Housing Survey). As the population grew, housing demand followed, causing the development of 2 large

residential areas: Fifth Avenue Estates and The Highlands. These developments cover a large portion of land within Niverville’s boundaries, as Figure 2.4 outlines the total area of the new developments beginning with the construction of a street network.

Figure 2.4: The Town of Niverville, 2002



Source: Manitoba Land Initiative (2015), Google Earth Images (2002) (Adapted by author)

The Highlands and Fifth Avenue Estates both contain a street pattern that differs from the traditional grid pattern of older residential areas in Niverville. The streets exhibit a “cul-de-sac” style street pattern seen in the majority of modern suburban neighbourhoods, which allows for the development of man-made lakes, green spaces and walking paths.

Fifth Avenue Estates is a master planned residential area in the southeast corner of Niverville that contains single-family, compact single family, two-family and multiple-family lots (Fifth Avenue Estates, 2012-2013) (See Table 2.2).

Table 2.2: Fifth Avenue Estates housing lots

	# of lots	Approx. # of units
Single family lots	124	124
Lakeside walkout	109	109
Lakeside non-walkout	15	15
Compact single family lots	96	96
Two family lots	433	866
Multiple family lots	47	Unknown
Total	824	1,210

Source: Fifth Avenue Estates, 2012-2013

It also contains 3 ½ miles of walking paths, landscaped parks and playgrounds and man-made lakes (Fifth Avenue Estates, 2012-2013). The development is currently in its final phase of selling off remaining lots and units.

Figure 2.5: Whole development master plan



Source: Fifth Avenue Estates (2012-2013) “Whole development site plan”

The Highlands is the second new development in Niverville and it surrounds Old Drover’s Run, the golf course located in Niverville. The Highland Lots are comprised of 2 and 3 storey townhouses while Highlands Estates are single-family homes situated on

the edge of the golf course (The Highlands, 2016). Currently, there are approximately 132 completed and 66 under construction at the Highlands, with several more lots and units to be developed (See Table 2.3).

Table 2.3: The Highlands housing lots

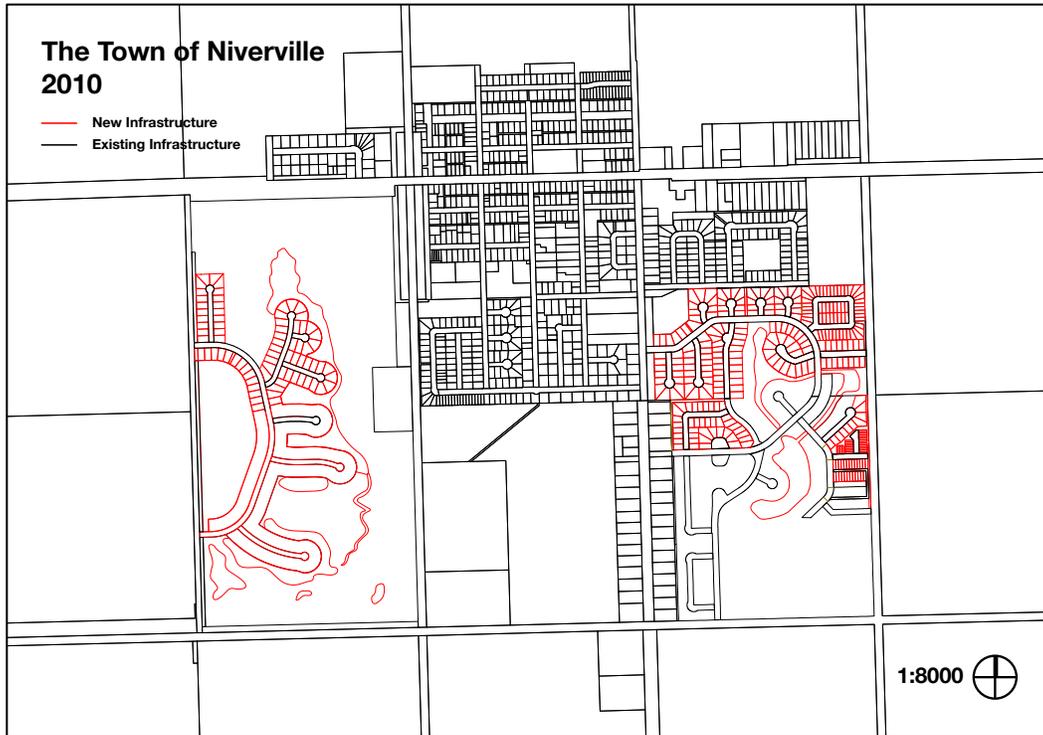
	# of lots
Lots completed	132
Under construction	66
Total to date	198

Source: The Highlands, 2016

The third new residential development is the Prairie Crossings Condominium complex, which started construction around 2013 (Prairie Crossings, 2017). The development contains 2 – 3 storey townhouses, bungalows and 12 and 18 unit apartments, with 1.5 acres of green space and 1,200 square feet of walking trails (Prairie Crossings, 2017).

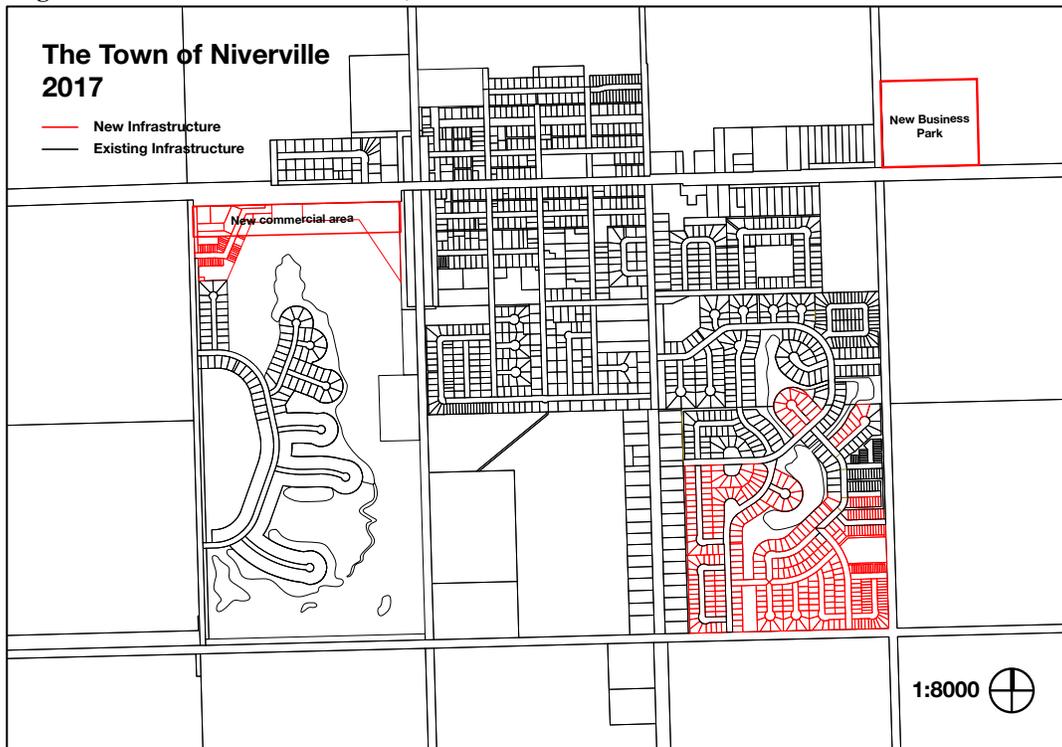
In 2010, development steadily continues in these residential areas. Figures 2.6 and 2.7 shows the increase in physical development including roadways and lots, from 2010 to 2017.

Figure 2.6: The Town of Niverville, 2010



Source: Manitoba Land Initiative (2015), Google Earth Images (2002) (Adapted by author)

Figure 2.7: The Town of Niverville, 2017



Source: Manitoba Land Initiative (2015), Google Earth Images (2002) (Adapted by author)

In 2017, commercial development had begun to expand, with the newly zoned commercial area on Main Street and the new Niverville Business Park. The business park broke ground in July 2017 with 23 acres of land being subdivided into commercial lots in the Northeast corner of Town (The Town of Niverville, 2017).

2.3 Commuting data

The commuting flow data from the 2006 and 2011 Census programs was used for this research. Both the 2011 and 2006 Statistics Canada data on commuting were reviewed, as the data from 2011 was not completely reliable. Although the 2016 Census commuting flow data was released on November 29, 2017 well after this research began, it is still worth mentioning in this chapter.

For the National Household Survey in 2011, commuting flow was calculated for “census subdivisions for the Employed Labour Force Aged 15 Years and Over Having a Usual Place of Work, for Census Subdivisions, Flows Greater than or Equal to 20” (National Housing Survey, 2011). Niverville residents exhibit a unique commuting pattern, as almost the same percentage of commuters are travelled to work in Winnipeg (40.8%) as they are to Niverville (39.7%) (See table 2.3). The remaining were travelling to Steinbach (12.6%), the Rural Municipality of Hanover (4.1%) and St-Pierre Jolys (2.9%).

Table 2.5: Commuting flow data, 2011

Workplace Location	Frequency (%)
Winnipeg (CY)	565 (40.8%)
Niverville (T)	550 (39.7%)
Steinbach (CY)	175 (12.6%)
Hanover (RM)	55 (4.1%)
St-Pierre Jolys (V)	40 (2.9%)
Total	1,385 (100%)

Source: Statistics Canada, 2011 National Housing Survey

The 2006 census was able to provide more detailed information on where Niverville residents worked (See Table 2.5). The subcategories of those who “Worked at usual place”, indicate that the majority of commuters “Worked in a different census division (county)” (44%), following with the second highest percentage that “Worked in census subdivision (municipality) of residence (40%).

Table 2.6: Place of work status, Census 2006

	Frequency (%)
Worked at home	85 (6%)
Worked outside Canada	10 (0.7%)
Worked at usual place	1,045 (80%)
<i>Worked in census subdivision (municipality) of residence</i>	420 (40%)
<i>Worked in a different census subdivision (municipality) within the census division (county) of residence</i>	155 (14%)
<i>Worked in a different census division (county)</i>	470 (44%)
<i>Worked in a different province</i>	10 (1%)
Total for worked at usual place	1,305 (100%)
No fixed workplace	165 (12%)

Source: Statistics Canada, 2006 Census of Population

Although “Worked in a different census division (county)” does not specific which division, it is worth noting that 40% of Niverville residents commuted to the census division of their residence in 2006, which is slightly higher than the 2011 percentage of those commuting to Niverville (39.7%).

The 2016 Census on commuting flow was included recently in this research as the information was released November 29, 2017. The data showed an increase in those commuting to work in a “different census subdivision and census division within province or territory of residence” from 470 (44%) in 2006 and 1,020 (56.7%) in 2016. As this is a 10 year period, it is expected to increase that much as population increases, and 2016 data sets are more easily compared to 2006 data sets than the 2011 National

Housing Survey as the count categories are identical. This increase in Niverville commuters working outside the census division of their residence still indicates that individuals are commuting to areas all over the Province.

Table 2.4: Place of work status, Census 2016

	Frequency (%)
Worked at home	105
Worked outside Canada	0
Worked at usual place	1,795
<i>Commute within census subdivision (CSD) of residence</i>	420 (23.3%)
<i>Commute to a different census subdivision (CSD) with census division (CD) of residence</i>	350 (19.4%)
<i>Commute to a different census subdivision (CSD) and census division (CD) of residence</i>	1,020 (56.7%)
<i>Commute to a different province or territory</i>	10 (0.6%)
Total for worked at usual place	1,800 (100%)
No fixed workplace	105

Source: Statistics Canada, 2016 Census of Population

3.0 LITERATIVE REVIEW

3.1 Exurban Developments

The exurban region has been defined as “a commuting zone, an alternate living space, and an economic zone of production and consumption” (Beesley, K. B. Millward, H., Ilbery, B. & Harrington, L., 2003, p. 16). Studies of the exurban phenomena have been occurring for decades. Friedmann and Miller (1965) described exurbia as a “devil’s mirror”, for its physical and socio-economic characteristics that “reflect the very opposite of metropolitan virility” (p. 313). According to several scholars, there is no concrete definition of exurbia that exists today (Johnson, 2008, p. 709; Nelson, Nelson et al., 1994, p. 45). Although the exurban neighbourhood contains similar socio-economic characteristics to suburban neighbourhoods, the lifestyle preferences of exurbanites differ greatly (Nelson et al., 1994, p. 45; Spectorisky, 1955). Some have theorized that the demand and desire for the exurban neighbourhood is rooted in the failure of suburban neighbourhoods for its lack of community sensibility (Nelson et al., 1994, p. 54). The exurbs possess both rural and urban qualities, and whether or not a community possesses more rural or urban attributes is contingent upon the characteristics of each exurban context.

3.1.1 Exurban small town residential

There are two types of exurbs that have been identified in planning literature. The first is exurban rural residential, which are dwellings built in remote rural areas, not for agricultural purposes, that are within commuting distance to an urban center (Dueker et al., 1994, p. 45). The second is exurban small town residential, which classifies as

small towns located near an urban center (Dueker et al., 1994, p. 45). According to the literature, there is a dearth in the research regarding people's preferences and the social makeup of exurban small town settlements (Dueker et al., 1994, p. 54). Small towns contain a "mix of traditional reasons" as motivators for residential location choice (Dueker et al., 1994, p. 51). These may include a strong sense of community, a good place to raise a family and similar religious or political values. These values may hold true for most social constructs of small towns, however only a single study of one town is needed to prove or disprove the hypothesized exurban small town theory.

3.1.2 Preference for rural living

The counterurbanization that has persisted in North America, has allowed individuals to "escape the perceived ills of the city for the perceived benefits of the countryside" (Beesley, 2003, p. 19). The pastoral image of living in nature is highly valued and sought after among individuals when choosing a residential neighbourhood. Exurban developments are therefore increasingly attractive as they contain the experience of "country" or "rural" living while still being within close proximity to an urban center with several amenities. Johnson (2008) conducted a study to gain perspectives on why individuals moved to their current exurban location. Common reasons were stated from participants, such as its good for raising a family, it has a great sense of community, and less crime. Among all responses however, the most common reason for exurban living was privacy (Johnson, 2008, p.709). Living closer to nature was never explicitly stated among participants and was noted as being a "post hoc rationalization" among individuals (Johnson, 2008, p. 714). This study, however, appears to focus on exurban rural residential rather than exurban small town residential. The majority of respondents

in the study reference their large properties and the privacy that comes with it, which is not, according to Dueker (1994), the appropriate descriptor of exurban small town residential. Therefore, the research from both Johnson (2008) and Dueker (1994), signify a need for more data collection on people's preferences for specifically exurban small town residential areas.

3.1.3 Right to space in the exurban context

Kevin Lynch's *Good City Form* (1994) identifies a person's right to space, having applications to nearly all spaces including dwellings in the exurban context. Lynch (1994) defines the *Right of Use and Action* as behaving freely within a space (p. 205). Concepts of freedom and control are of high importance to exurban dwellers living preferences. The traditional suburban home is a "symbol of home ownership, of property, and all freedoms and power that come with it", therefore a modern exurban home may contain an even greater sense of freedom and power that comes with a larger lot, as well as more privacy and being located further from city regulations and restrictions (Herrington, 2009, p.22). This theory could explain the increasing preference for the exurban or the exurban small town lifestyle, as these communities continue to grow at a rapid pace. Professional planning thereby has an obligation to understand how to plan for communities that are appearing to acquire more space along the edges of cities, as consumers are expressing their increased desires for them.

3.2 Commuting

Commuting to and from a work location affects almost everyone's lifestyle in some regard. Whether a commute is an hour, 2 minutes or non-existent, it affects an

entire household. Commuting is becoming more complex with suburban and rural office locations, multiple worker households and increasing modal choices. Therefore, it is important for future transportation research and plans to take into consideration factors that might affect a commute other than where people chose to live. For the exurban neighbourhood, commuting is perceived to be a more daunting task, as most assume that exurbanites travel by car and work in the city nearest to them. The relationship between commuting and settlement structure is mostly unknown to researchers, and to not understand the settlement structure of where people chose to live will create more uncertainty when conducting research on commuting.

3.2.1 Land use and travel behaviour

In transportation research, statistical models have been derived to analyze and predict commuting patterns, however several issues still persist when selecting the variables of such models. Variables such as socio-demographics or geographical scale for example, have either been too controlled or neglected in the research (Boarnet & Sarmiento, 1997, p.1156, 1166). This quest to uncover the effects of land use on travel behaviour has only become more difficult as the complexities of travel and spatial dispersion of residential and commercial centers have increased. The amount of routes that can be taken, mode of travel and number of household workers are also factors that induce research frustration (Guiliano, 1989, p.146). Considering the location of exurban households, and all the complexities it may ensue, the answers to solving transportation issues may be lost if statistics are not also analyzed through a qualitative lens.

Professionals that create land use plans and policies should observe the subjects that they plan for and retrieve information on individual preferences (Boarnet, 2011, p. 208). As

this research has traditionally used complex statistical models, it remains only “exploratory” and requires more input from qualitative research techniques (Crane, 2000, p.18).

3.2.2 Jobs-Housing balance

The Jobs-Housing balance is a theory used to explain the relationship between the distance from one’s residence and work location. The research surrounding this has worked to solve issues of increased distances from housing to employment locations. The balance has exhibited a more “locational” focus to solve transport issues, as opposed to a “modal” focus (Levine, 1998, p.133). Levine (1999) concludes that increased travel choices may still cause someone living in a dense area to make more trips than someone with a longer commute as their trips are much shorter (p.18). This conclusion also draws upon another, more recent, study to which transportation professionals often “under-estimate” car use and “over-estimate” multimodal use, as their own experiences with commuting impairs their judgments of the general public (Ralph & Delbosc, 2017p. 292). Another query is factoring in the variable of multiple workers within a household. Guiliano (1989) concluded that “residential location has a greater effect on job choice than job location has on residential choice” in her analysis of secondary wage earners within a household (p.149). To decrease the distance between the household and work locations, a household needs to sacrifice location options and housing types for options that are within closer proximity to their employment (Levine, 1998, p.134). The Jobs-Housing theory also needs to be applied to locations of differing neighbourhood types in order to progress this area of research.

3.2.3 Employment accessibility

The amount of choices for people's travel behaviour, and the frequency to which they are increasing, is only applicable to those with the means to acquire such choices. Several studies of employment accessibility have created transportation models that strive to create inclusive and sustainable communities (Ferreira & Batey, 2007, p. 429). Ferreira and Batey (2007) have identified models, or approaches, as they have occurred in sequence throughout accessibility planning (p. 429). A new way of conceptualizing accessibility is to study how these approaches can be layered simultaneously to understand the deeper issues beneath accessibility in transportation (Ferreira et al., 2007, p. 429). The approaches are: the transport based approach, the demand aware approach, time aware approach, perceptions aware approach, and institutionally aware approach (Ferreira et al., 2007, p. 429). It is suggested that these approaches be "inverted" in their respective sequence, to achieve a more sustainable and inclusive form of accessibility (Ferreira et al., 2007, p. 449). This means commencing a project using the institutionally aware approach, which acknowledges that people contain the will and creative measures to change their level of accessibility (Ferreira et al., 2007, p. 437). Institutional centers are the cornerstones of neighbourhoods, i.e. churches, schools, community centers, and actions taken to implement them are the same motives that a community can have in the hopes of changing their transportation accessibility (Ferreira et al., 2007, p. 435). As Ferreira and Batey (2007) state "transportation systems are also institutions", in which the public has the right to change to suit their needs (p.436).

3.2.4 Rural commuting

Rural transportation systems explore and implement strategies that will achieve “access to destinations and goods to attain desired quality of life” (Federal Highway Administration, 2001). The coordination of land use and transportation is the main objective of these systems by assessing where people live and how they access employment. The largest hurdle for these systems is not containing the “derived demand” that urban areas have, causing limited options for travel in rural and exurban areas (Federal Highway Administration, 2001). Because of this, where a person lives and works greatly affects their commute. The automobile is the most likely mode for residents of rural and exurban areas, which may not always be an option for certain demographic groups. To increase transportation accessibility and modal options for all, the initiatives may come from a grass roots approach (Levine, 1999, p.1). As previously stated, Ferreira and Batey (2007) also asserted this with by identifying the institutionally aware approach to increase the options for transportation systems in a particular region. Local residents, businesses and elected officials can take action to by creating carpooling/ride-share programs, telecommuting options, or others, to improve employment accessibility.

3.2.5 Social themes of automobile commuting

Driving an automobile has created several issues including increasing greenhouse gas emissions, producing isolating societies, and generating neighbourhoods that are suited only to the mobility of a car. The perceptions of using a car however vary greatly, ranging from horrible to extremely enjoyable. A study conducted by Turcotte (2010) of commuting in several Canadian cities concluded that the majority of workers were satisfied with their commute times and those with longer distance commutes accepted

long commutes as they chose to live further from their work location (p. 31). This indicates that residential location and other social factors highly influence automobile commuting, to which that information is often not present in transportation research. Other research has identified particular themes that have surfaced from interviewing car commuters, and that a more “multi-layered understanding” of such perceptions will aid in solving transport related problems surrounding the dominance of the automobile (Kent, 2014, p.103). According to Kent (2014), a major reason for automobile use is time, however in this study the car was never faster than other modes of transportation, but the time taken on alternative modes required a greater “investment” of one’s time, to which time was valued greatly among car commuters (Kent, 2014, p. 109). Another reason among participants was the flexibility, freedom, and privacy that came with owning a vehicle (Kent, 2014, p.110). The flexibility to drive anywhere, the privacy of an enclosed car space and the ability to personalize a space references Kevin Lynch’s *Right of Modification* that an owner possesses rights over their space (Kent, 2014, p.110; Lynch, 1994). Therefore, positive effects are created for the individual and how they perceive their environments, which is important when understanding the social implications of commuting. As several initiatives in planning aim to eliminate automobile commuting or to decrease the length of a commute, it is crucial to understand that there are more components to automobile commuting than saving time and that developing new options within automobile commuting can increase transportation options for exurban and rural residents.

3.3 Conclusion

The literature review expresses that more research is needed to define what the exurban context is and if its origins were due to a “failure of the suburbs” according to Nelson et al. (1994). Preferences for small town living that begins to describe the characteristics of the exurban small town residential, is also in its infancy and requires more research when determining how to plan for these communities. Studies pertaining to workplace commuting have been more extensive than exurban studies, however, the work still remains to be exploratory. It is important to note that exurban communities contain employment areas causing commuting away from large urban centers where formerly most workplaces were located. Other factors that influence a worker’s commute include the work locations of other members in their household and how a household makes decisions regarding where they should live and how they should commute. Information such as this can only be explored by gathering the opinions, perceptions and decisions of individuals who commute from an exurban area.

This research projects intends to fill in the gaps identified in the literature. As it is important for this research, and future research, to gain more knowledge in exurban developments and commuting separately, it is also important to study the relationship between exurban developments and commuting. Exploring the relationship between the commuting and the exurban community is even more important as commuting may have a greater influence on an exurban household’s choices than households within an urban or suburban area.

4.0 RESEARCH METHODS

A few research methods were used to gather and analyze information for the purposes of answering the research questions. For this case study, information was gathered on Niverville's context, including an evaluation of Niverville's current land use and progression of the Town's built form over the past century. Census subdivision data from the Census programs of 2016, 2011 and 2006 were used to collect population and demographics information as well as commuting flow data. The primary research method is a survey of Niverville residents that gathers information on people's commuting patterns, their preferences for exurban living and the decisions made within their households on where they chose to live and how to commute. The following sections outline in further detail the research methods used for this case study.

4.1 Case Study Research

The research strategy is an explanatory case study of the Town of Niverville in Manitoba. "Explanatory case studies are useful when conducting casual studies" to determine the relationship between multiple factors (Berg, p. 230). This method aims "to uncover a relationship between a phenomenon and the context that is it occurring (Gray, p.124). The multiple factors analyzed include the neighbourhood preferences, commuting patterns and the household decision-making processes of Niverville residents, which will aim to discover if exurbanites are working in areas other than Winnipeg and if exurban communities contain components that Winnipeg neighbourhoods are lacking.

For this case study, the resident survey was the primary research method and contained questions that gathered both quantitative and qualitative data. Quantitative data was gathered through close-ended multiple-choice questions, and open-ended questions gathered qualitative information regarding the thoughts and opinions of respondents regarding neighbourhood and commuting choices.

Due to the explanatory nature of the case study, external validity, as opposed to internal validity, was the main concern, as internal validity only deals with relationships between 2 or 3 factors, to which this research contains multiple variables for consideration (Yin, 2009, p. 42). The goal of external validity for an explanatory case study is to generate findings that can be generalized to a broader population (Yin, 2009, p. 40). The goal of reliability for this study is to be able to replicate the study if conducted again by another investigator by employing “operational steps” when collecting data and creating a case study database (Yin, 2009, p. 40, 45). Steps taken to ensure external validity were conducted at the research design phase of the practicum, and steps to ensure reliability were executed at the data collection phase. The information gathered from the survey was meant to build upon the gaps in the existing information on Niverville’s current context to “define a domain to which a study’s findings can be generalized” (Yin, 2009, p.40). The existing information had only indicated that Niverville was growing very quickly and that residents were commuting to areas outside of Niverville as much as they were commuting to Winnipeg. This case study aimed to gather more convincing evidence of these conditions to aid in the deeper understanding of the exurban neighbourhood and the relationship between the exurban neighbourhood and commuting. More detailed information will be described further on how the survey employed

“operational steps” in data collection as well as a rigorous system of coding to ensure unbiased research that could be replicated and generalized.

4.2 Niverville as a case study

The research on Niverville’s context including census data, land uses and built form, was gathered to build the foundation for the case study. Some of this information was collected before the research design phase in order to select a suitable case study of an exurban town outside of Winnipeg with unique commuting characteristics. The choosing of Niverville as a case study was due to the following information that was gathered prior to conducting the survey.

4.2.1 Census data

Niverville was experiencing a large population increase over the past decade, leading to believe that it is a highly desired community to live in. This increase was most notable from 2006 to 2011 with a population increase of 43.7%, and a 30.2% increase from 2011 to 2016, creating a current population of 4,610 (Statistics Canada, 2011 national Housing Survey & 2016 Census of Population). Gathering information from the Census was a good start to the research, however more data was needed in order to determine why families were moving there and if their commutes and work locations were a factor in making that decision.

Commuting flow data that was also available from the Census programs, indicated that in 2011, 40.8% of Niverville residents were commuting to Winnipeg and 39.7% to Niverville (See *context* chapter for more detailed data). This was the first indication that modern commuting was not just to Winnipeg and its downtown core, but to several areas within the city and other cities and towns in Manitoba. This information

on commuting combined with the growing population made Niverville a strong candidate for this practicum topic.

4.2.2 Land use

The location of Niverville, along with its various land uses, rendered it to be an example of an exurban small town residential area. As Niverville is approx. 30 kilometers from Winnipeg, it makes it within a reasonable commuting distance and located in close proximity to an urban area with several amenities. The word “exurban” contains the word “urban” meaning its reliance on a larger urban center is key to its definition and therefore its research. Exurban small town residential can be characterized as a small town located outside of a City with several amenities, which is more closely defined as a complete community and not just a cluster of houses (See land use map in *context* chapter).

4.2.3 Built form

As shown in the context chapter, Niverville’s built form over the past 20 years has grown tremendously. Streets for new developments began to form around 2002 and are still being constructed today for new housing areas. Along with residential, commercial enterprises are growing with the construction of the Niverville Business Park and other commercial areas.

Analysis

The information gathered on Niverville has created an intriguing case when studying exurban communities in Manitoba and their commuters. This information only begins to scratch the surface of the relationship between neighbourhood and commuting choices of Niverville residents. The case study will determine if the new information

gathered exhibits similar findings from the census data and the land use and built form analysis.

4.3 Survey

I surveyed individuals from Niverville regarding their daily commute, reasons for why they moved to Niverville and how their household made decisions on where to live and how to commute. Two different forms of the survey were distributed: an (1) intercept (in-person) survey and an (2) on-line survey. The participant sample, or unit of analysis, for this research was individuals 18 years and older currently in full-time, part-time, contract or temporary work that live in Niverville or identify as living “outside” of Niverville. The target survey sample was 100 responses, due to the time and resource constraints of completing a graduate level practicum with one researcher.

The majority of the survey questions were close-ended, multiple-choice questions that generated quantitative data. This data only produced descriptive statistics due to the small sample size and the multi-variate study (Berg, 2001, p.102). Qualitative data was produced through open-ended questions that asked for respondents’ attitudes and opinions regarding commuting, neighbourhood choice and their household decision-making process. This information provided a deeper understanding of respondents’ neighbourhood and commuting choices that aimed to answer the research questions of this practicum.

4.3.1 Intercept survey

The intercept survey was conducted to reach a larger demographic of the sample size and to obtain data quickly. Intercept surveys occurred at the Niverville Heritage Center (100 Heritage Trail, Niverville, MB) for 3 days during the Home Inspirations

Show (March 31st – April 2nd) and for 1 day at Niverville Bigway Foods (259 Main Street) (See Table 4.1 for survey hours at each location).

Table 4.1: Intercept survey hours

Survey Location	Date	Hours
Niverville Heritage Center (Southeast home inspirations show)	Friday March 31 st , 2017	6:30-9:30 pm (3 hours)
	Saturday April 1 st , 2017	10:00 am – 2:00 pm (4 hours)
	Sunday April 2 nd , 2017	1:00 pm – 4:00 pm (3 hours)
Niverville Bigway Foods	Saturday May 6 th , 2017	11:00 am – 3:00 pm (4 hours)
Total locations: 2	Total days: 4	Total hours: 14

Niverville Bigway Foods was contacted prior to surveying as to not warrant intrusive behaviour and the surveying at the home show was conducted at the Niverville Chamber of Commerce booth, which did not require prior permission. Participants were approached and asked if they wish to participate in a 5 – 7 minute survey regarding their daily commuting patterns (See *Appendix A* for intercept survey question list). Before the survey began, they were asked if they are 18 years and older, if they live in Niverville or identify as living “outside” of Niverville, and if they are currently in the workforce. The survey did not proceed if they do not meet these requirements. If they did meet the requirements, I began by identifying myself as a student at the University of Manitoba doing research for my Masters Degree in City Planning. Written consent was obtained before proceeding with the survey, and the participant was given a summary of the project and my contact information. If they met participant requirements and declined participating in the survey due to time constraints, I offered them a card containing the on-line survey URL link. Participants were notified that these answers were to remain anonymous, that they may ask questions at any time, and that they may refuse to answer any questions. In the findings chapter, a chart is provided for each question with the non-response rate, as the non-response rates differed for each question due to varying level of

respondent participation, i.e. respondents were allowed to skip any questions.

4.3.2 On-line survey

An on-line survey was conducted as a low cost method to allow participants to complete the survey on their own time and to reach a larger demographic of the participant sample. The administering of this survey was done using Qualtrics. An online announcement was posted to community websites in Niverville including “Niverville Chamber of Commerce” news bulletin board, “Niverville: Where you Belong” news page and the Town’s Facebook group “Niverville 2.0”. (See Table 4.2 for detailed website posting dates and the response rate per date).

Table 4.2: On-line survey link website postings and response rates

Website posted to	Date	Response rate
Niverville Chamber of Commerce	Sunday April 2 nd , 2017	1 (0.65%)
Town of Niverville “Where you Belong”	Wednesday April 5 th , 2017	59 (38.06%)
Niverville 2.0 Facebook group	Friday April 7 th , 2017	39 (25.16%)
Total websites: 3		

The response rates were significantly higher when the posting was made to the Town’s website and the Town’s facebook page. Websites were contacted to request that they post a small description of the research with a URL link to the survey as well as my contact information. Once I was accepted as a member to the Niverville 2.0 facebook group, I posted directly to the group (See *Appendix B* for the on-line survey questions list).

4.3.3 Analysis

Quantitative data

The content analysis of quantitative survey questions was rather straightforward, as all quantitative questions generated one predetermined answer (via multiple choice

questions) and produced nominal, ordinal, or interval forms of data (Gray, 2004, p. 286). Nominal data was generated by categorical questions including, “What were your reasons for living in Niverville?”, “What area do you work in?” and “How do you get to work everyday?” Ordinal data produced statistics on how individuals ranked certain aspects of their community or commute, for example, “How has the community met the expectation you had when you first moved there?” Options for that question were: “Far exceeds expectations”, “Exceeds expectations”, “Equals expectations”, “Short of expectations” and “Far short of expectations.” Interval data produced numerical questions including, “How long have you lived in Niverville?”, “How many people living in your household?” and “How much time does it take to commute to work?” All of this data uncovered more information on the household composition of Niverville residents and the commuting characteristics of each respondent.

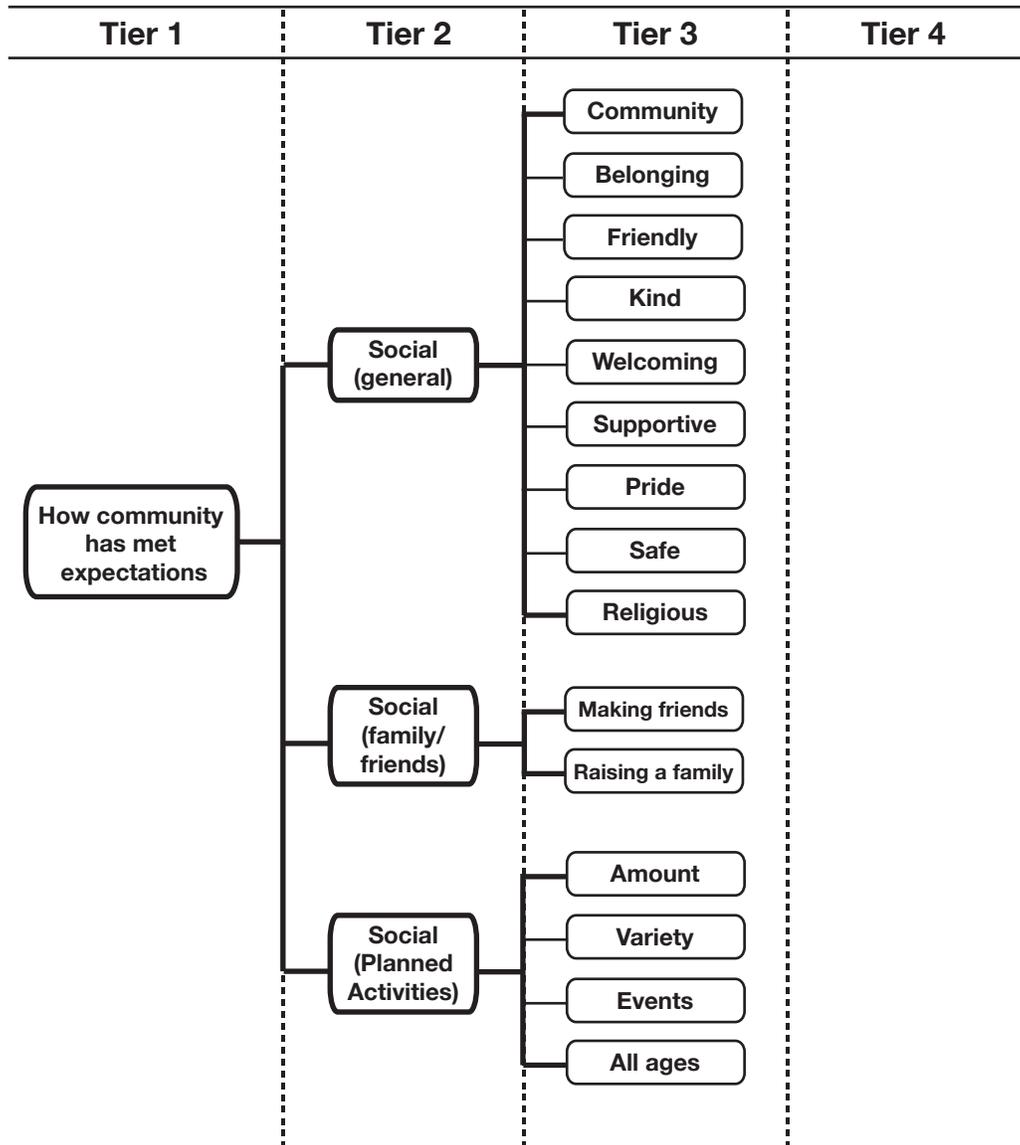
Qualitative data

Content analysis of qualitative data involved the, “making of inferences about data (usually text) by systematically and objectively identifying special characteristics (classes or categories) within them” (Gray, 2004, p. 328). This is achieved through the use of coding frames “...used to organize and identify findings after open-coding has been completed” (Berg, p. 253). For this research, coding frames was in the form of “Tiers” to categorize open-ended survey data. Figure 4.1 outlines the hierarchy of categories, using question 6b as an example.

Figure 4.1: Coding framework, question 6b

CODING FRAMEWORK

Question 6b: Could you provide some specific examples as to why the community has or has not met your expectations?



Broad categories that existed within the data were placed into “Tier 1 Themes”.

Within a specific Tier Theme there were more detailed categories named “Tier 2

Themes”. This process varied for each open-ended question as not all of the data

generated “Tier 4 Themes”, which is the most detailed level of coding. For Question 6b,

Tier 1 themes included the 2 categories: (1) “How the community *has* met expectations” and (2) “How the community *has not* met expectations.” For “How the community *has* met expectations”, all themes pertaining to “Social” were split into 3 separate Tier 2 themes: (1) “Social (general)”, (2) “Social (family/friends)” and (3) “Social (planned activities).” These themes were then subcategorized further to create Tier 3 themes.

Berg (2001) defines a *theme* as, “...a simple sentence, a string of words with a subject and a predicate”, which this research uses to identify all coded categories, regardless of some themes being only one word (p. 247). Manifest content analysis was employed here, as words or short phrases that frequently appeared in responses were counted to create a quantifiable and objective view of the qualitative data (Berg, 2001, p. 242). Some researchers may also pose that this approach is a form of axial coding, starting with general to detailed categories as an intensive form of coding for each category (Berg, 2001, p. 253).

4.4 Limitations

The data collected is a “snapshot” that resembles a portion of how all residents in Niverville feel towards their community and their commute. The sample size was calculated using the Town’s population from 2011, of 3,540, with a confidence level of 95% and a confidence interval of ± 5.41 , to equal a sample of 300. Due to the limited project time and resource constraints, the examining committee agreed upon a sample size of 100. The data collection however exceeded that minimum with a total of 182 surveys; 168 surveys were completed at 50% or higher. As this is a descriptive or “snapshot” statistic and not statistically significant, the data collected still reasonably reflects the commuting patterns of Niverville residents as well as their opinions and

perceptions on community and commuting choices to generate conclusions which can be generalized to a broader population.

Limitations exist in the survey design, as I created a short length of survey to increase the willingness of potential participants and to gather a higher amount of responses. The survey asked participants to list all work locations, however participants were only allowed to list one commute time. The survey might have taken too much of a participant's time if they had to list all work locations, commute time for each, primary mode used to get to each location etc. While that would have enriched the data and given a more detailed account of their commute, keeping the survey short and asking more questions related to the participant's thoughts and opinions through open-ended questioning was the primary intention of the research.

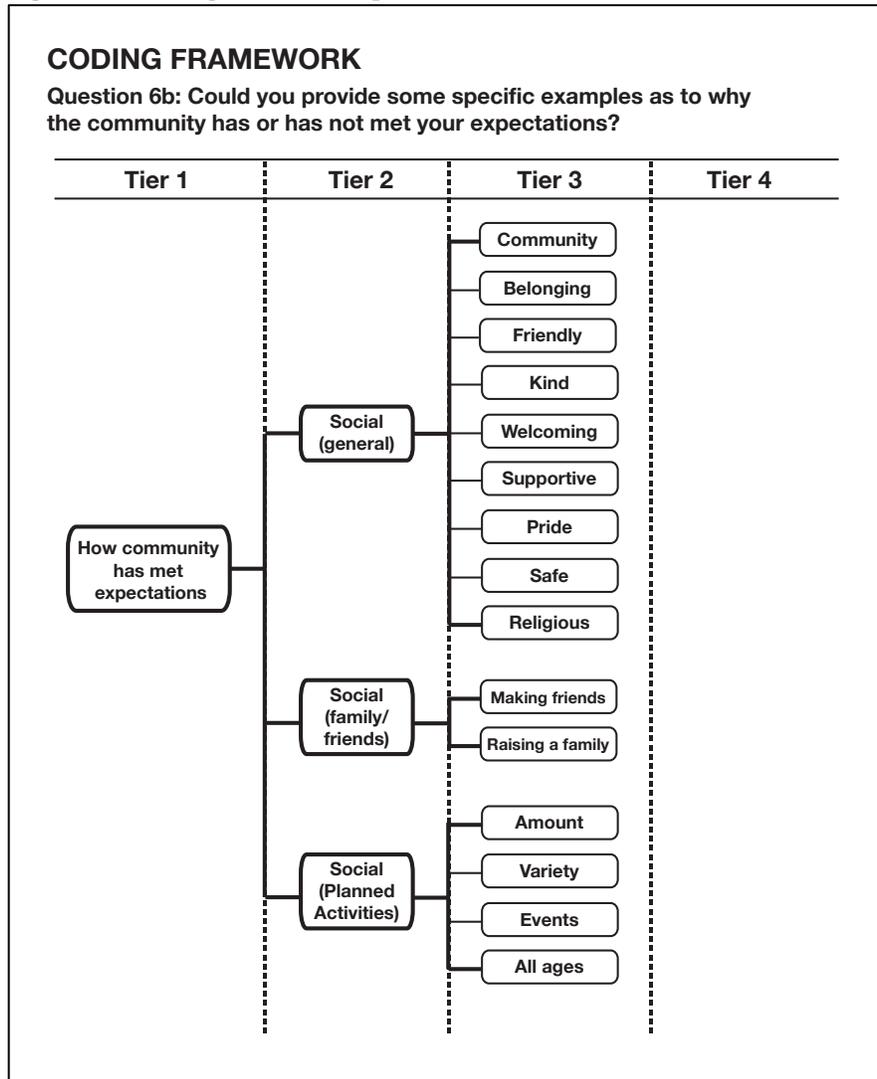
The collection of work locations did not gather a precise geographical location as maintaining work location anonymity amongst participants was of great importance for the survey. Postal code areas were collected, however are very large geographically, and inconsistencies in responses may be attributed to this record of work location.

5.0 FINDINGS

The survey was the primary method of data collection for this research and was conducted in April and May 2017, either in-person (intercept surveying) or on-line. Participants of the survey were asked 14 questions that gathered information on the community that they live in, their current commute and the household decision making process regarding their choice of community and how they commute. Each section within this chapter covers one question of the survey in the order that the questions were asked. The majority of questions were multiple-choice questions, however a few questions were open-ended to collect qualitative information. Common “Themes” that arose from the open-ended questions were coded into “Tiers” (See Figure 5.1). Tier 1 themes for all questions consisted of broad categories, which were then divided into more detailed categories for Tier 2, and so on for Tiers 3 and 4. Every data set per question varied in terms of tier categorization.

For a number of questions, Tier 2 themes consisted of broad categories such as “Social”, “Amenities” and “Housing”, which were then subcategorized into Tiers 3 and 4 themes. For example, the theme “Social” was often broken down into the following 3 themes: (1) “Social (general)”, (2) “Social (family/friends)” and (3) “Social (planned activities)” (See Figure 5.1). Each group of responses for each question was coded into a minimum of 3 Tiers.

Figure 5.1: Coding framework, question 6b



5.1 Household size

To determine the household size of each respondent, participants were asked, “How many people live in your household?” The multiple-choice responses were: “1 person”, “2 people”, “3 people” and “4 or more people.”

Table 5.1: Household Size compared with census of population 2016

Survey Results	Census 2016
----------------	-------------

Number of people	Frequency (%)	Frequency (%)
4 or more people	79 (47%)	560 (36%)
2 people	47 (28%)	490 (31%)
3 people	36 (21%)	260 (17%)
1 person	6 (4%)	245 (16%)
Total responses for question	168 (100%)	1,555 (total households)
Total survey responses	168 (100%)	X

Table 5.1 shows that the majority of Niverville households contain 4 or more people (47%) and the second highest with households containing 2 people (28%). Survey results were compared with the 2016 Census of population data and revealed that the rankings from highest to lowest within the survey data are in the same order for the Census counts.

5.2 Number of workers per household

Survey respondents were asked the following question to verify how many workers live within their household; “Of the people living in your household, how many are 18 years and older and in the workforce (either full-time, part-time, or contract/temporary work)?” The options for respondents were identical to the previous question regarding household size.

Table 5.2: Number of workers per household

Number of people	Frequency (%)
2 people	112 (67%)
1 person	31 (18%)
3 people	19 (11%)
4 or more people	6 (4%)
Total responses for question	168 (100%)
Total survey responses	168 (100%)

The majority of households surveyed contain 2 individuals who are 18 years and older and working either full-time, part-time, temporary or contract work (67%) (See Table

5.2). This indicates that dual-earner incomes are the most common amongst the surveyed households in Niverville.

5.3 Time lived in Niverville

Participants were asked, “How long have you lived in Niverville?” to determine how many years respondents have lived in Niverville. The options for respondents consisted of “Less than a year”, “1 – 5 years”, “5 – 10 years” or “More than 10 years.”

Table 5.3: Time lived in Niverville

Years	Frequency (%)
1 – 5 years	60 (36%)
5 – 10 years	44 (26%)
More than 10 years	41 (24%)
Less than a year	23 (14%)
Total responses for question	168 (100%)
Total survey responses	168 (100%)

As shown in Table 5.3, the majority of respondents selected “1 – 5 years” (36%) as having lived in the community. This majority of respondents living in Niverville between 1 – 5 years correlates with the recent population growth in Niverville of 30.2% between 2011 and 2016, as seen in the 2016 Census of population (National Housing Survey 2011, Census Profile 2016).

5.4 Reasons for living in Niverville

For this question, respondents were asked, “What were your reasons for deciding to live in Niverville?” This question allowed participants to choose from as many of the listed choices that applied to them with an option to list an additional reason for why they chose to live in Niverville. The possible choices are listed in Table 5.4.

Table 5.4: Reasons for living in Niverville

Reasons for living in Niverville	Frequency (Percentage of total coded responses)
Good place to raise a family	103 (18%)
Housing was affordable	97 (17%)
Good community atmosphere	81 (14%)
You wanted more housing and property space	71 (12%)
You wanted to live closer to nature in a 'rural/country' type setting	68 (12%)
You wanted to live closer to family or friends	36 (6%)
You wanted more privacy	35 (6%)
Other: (Option for open-ended response)	26 (4%)
You grew up in Niverville	24 (4%)
For your spouse's/partner's or family's work	22 (4%)
For your work	18 (3%)
Total coded options recorded	581 (100%)
Total responses for question	168 (100%)
Total survey responses	168 (100%)

**Respondents could select multiple options for reasons why they chose to live in Niverville*

The top 3 chosen reasons were: (1) “A good place to raise a family” (18%), (2) “Housing was affordable” (17%) and (3) “Good community atmosphere” (14%) (See Table 5.4).

The bottom 3 reasons were: (1) “You grew up in Niverville” (4%), (2) moved “For spouse's/partner's or family's work” (4%) and (3) moved “For your work” (3%).

Additional reasons given by respondents, under the option “Other” (4%) included, “proximity to Heritage Lane Care Home” and, “to be in close proximity to aging parent”.

Another reason was choosing the location of Niverville as it is a “middle-ground” between two places, which were either work and/or recreation locations, for example, “I work in Winnipeg, but have family and friends in the Steinbach area, so Niverville was a happy middle-ground” and Niverville is, “closer to my vacation property in Roseau River, this places me between work and recreation”.

5.5 Community expectations

The question pertaining to community expectations was split into part A and part B. Part A was a multiple choice question that determined a respondent's level of

satisfaction for their community. Part B was an open-ended question that aimed to retrieve more information regarding how the community has or has not met their expectations prior to moving there.

5.5.1 Part A: Rating of community expectations

In part A of this question, respondents were asked, “How has the community met the expectations you had when you first moved there?” As shown in Table 5.5, the options included “Far exceeds expectations”, “Exceeds expectations”, “Equals expectations”, “Short of expectations” and “Far short of expectations.

Table 5.5: Community expectations

Level of expectation	Frequency (%)
Far exceeds expectations	11 (7%)
Exceeds expectations	55 (33%)
Equals expectations	91 (54%)
Short of expectations	7 (4%)
Far short of expectations	4 (2%)
Total responses for question	168 (100%)
Total survey responses	168 (100%)

The responses unveiled that the majority of respondents felt that Niverville equaled the expectations they had prior to moving there (54%). The second highest percentage shows that Niverville exceeded people’s preconceived expectations (33%), thereby illustrating that the majority of expectations for living in Niverville had been positive.

5.5.2 Part B: How the community *has* or *has not* met expectations

In the second part of the question, respondents were asked, “Could you provide some specific examples as to why the community has or has not met your expectations?” This was to gain a deeper understanding of how the community met, or did not meet, the expectations they had upon moving to Niverville. A number of themes reoccurred in the findings and have been organized into the following Tier 1 themes: (1) “How the

community *has* met expectations” (70%) and (2) “How the community *has not* met expectations” (30%).

Table 5.6: Tier 1 themes for community expectations

Tier 1 theme	Frequency (Percentage of total coded responses)
How the community has met expectations	214 (70%)
How the community has <i>not</i> met expectations	90 (30%)
Total coded	304 (100%)
Total responses for question 6B	133 (79%)
Non-responses	35 (21%)
Total survey responses	168 (100%)

How the community *has* met expectations

As observed in part A, the majority of respondents were generally satisfied with how Niverville had met their original expectations. The percentages for each theme represents the percentage of the total entries coded for this particular question. For this theme, Table 5.7 includes how frequent a theme was coded when a response indicated an aspect of the community where a respondent’s expectations were met. Each of these Tier 2 themes has been expanded into subsequent Tier 3 and Tier 4 themes.

Table 5.7: Tier 2 themes for how community has met expectations

Tier 2 theme	Frequency (Percentage of total coded for how community has met expectations)
Social	95 (44%)
Amenities	50 (23%)
Environment	28 (13%)
Better than the City	14 (7%)
Commuting	9 (4%)
Housing	8 (4%)
Town Growth	6 (3%)
Economic	4 (2%)
Total	214 (100%)

“Social” was the highest Tier 2 theme coded (44%), followed by “Amenities” (23%) and “Environment” (13%). These themes, and the less frequently coded themes, will be expanded on in this section of the chapter.

Social

Tier 3 themes of the Tier 2 theme “Social” was organized into 3 categories: (1) “Social (general)” (31%), (2) “Social (family/friends)” (9%) and (3) “Social (planned activities)” (4%).

Table 5.8: Tier 3 and Tier 4 themes for social

Tier 3 theme <i>Tier 4 theme</i>	Frequency (Percentage of total coded for the theme of social)
Social (general)	
<i>Friendly</i>	19 (20%)
<i>Community</i>	14 (15%)
<i>Supportive</i>	11 (12%)
<i>Welcoming</i>	8 (8%)
<i>Safe</i>	8 (8%)
<i>Kind</i>	3 (3%)
Social (Family/Friends)	
<i>Raising a family</i>	16 (17%)
<i>Making friends</i>	4 (4%)
Social (planned activities)	
<i>All ages</i>	4 (4%)
<i>Amount</i>	2 (2%)
<i>Events</i>	2 (2%)
Total	95 (100%)

**Tier 4 themes indicated in italics*

“Social (general)” was coded when responses referred to general descriptors of people in the community, for example “Friendly” (20%), “Sense of community” (15%), “Supportive” (12%), “Welcoming” (8%) and “Safe” (8%). A respondent stated that, “we live in a very welcoming neighbourhood where everyone looks out for each other on our street...it's nice to feel like this is a safe place to live.” “Social (family/friends)” was coded when responses contained social interactions specifically with family and friends, for example, “Raising a family” (17%) and “Making new friends” (4%). One respondent

stated that, “we were pleasantly surprised to be so welcomed by our neighbors and have since formed many friendships with other families, which has increased the amount we socialize outside the home.” Lastly, “Social (planned activities)” referred to the social activities that people plan to partake in, for example “All ages” (Describing how many activities are offered to a range of age groups) (4%), “Amount” of activities (2%) and Town “Events” (2%). A participant stated that there are, “...lots of extra curricular activities for all ages such as boot camps, summer camps, yoga, photography classes.”

Amenities

The Tier 2 theme of “Amenities” was broken down into 3 categories: (1) “Commercial” (2) “Facilities” and (3) “Services” (See Table 5.9). Tier 4 themes for each Tier 3 theme are indicated in italics and listed in terms of coded most frequently to least frequently.

Table 5.9: Tier 3 and Tier 4 themes for amenities

Tier 3 theme <i>Tier 4 theme</i>	Frequency (Percentage of total coded for the theme of amenities)
Commercial	23 (46%)
<i>Tier 4 themes: restaurants, grocery store, customer service, bank, gas station, flower shop, furniture store, hair salon, hardware store and hours of operation</i>	
Facilities	23 (46%)
<i>Tier 4 themes: schools, recreation, parks, daycare, senior care, churches, playgrounds, and walking trails</i>	
Services	4 (8%)
<i>Tier 4 themes: Maintenance/repairs, snow clearing and water and sewer</i>	
Total	50 (100%)

“Commercial” and “Facilities” were the highest coded (46%) amongst responses referring to amenities. “Commercial” included “Local grocers” and “Restaurants”, and included a statement such as, “we love shopping for groceries, flowers, furniture and getting our gas local as well.” For “Facilities”, “Recreation” and “Schools” were coded

the most, with one response including, “love the friendly community and schools” and “...lots of parks and community programs.”

Environment

The theme of “Environment” contains aspects of “country” and/or “rural” living as identified by respondents. The theme of “Environment” differs from themes within “Social”, as it refers to the social interactions with other community members that are often associated with living in a small town environment. A theme frequently coded was “Small town feel” and one respondent referred to this by stating that Niverville has a, “great sense of community (running into some of the same people at school, church, grocery store, doctor, a office, etc.), which helps to make a person feel connected, noticed, and part of something bigger. No one really wants to blend in so much that they aren't noticed. People don't move to Niverville to hide, they move here to be noticed.” Other themes for “Environment” include individuals that grew up in a rural environment, individuals that enjoy living in nature and individuals that appreciate the level of quietness in a small town. The theme of “Quiet” was the most recorded when referring to the community’s environment (39%) followed by respondents who “Grew up rural” (25%).

Table 5.10: Tier 3 themes for environment-social

Tier 3 theme	Frequency (Percentage of total coded for the theme of environment-social)
Quiet	11 (39%)
Grew up rural	7 (25%)
Small town feel	4 (14%)
Rural living	3 (11%)
Clean	2 (7%)
Total	28 (100%)

Better than the City

7% of responses from this question stated how living in Niverville was significantly better than living in Winnipeg. The Tier 3 themes included: Disliking the city in “General” (43%), “Social” environment of city neighbourhoods (21%), “Taxes” (21%) and “Cost of housing” (14%). Specific responses included, “friendly people, much more community-feeling than the city!” and “we have a home we could not have afforded in the city.” Respondents also felt that the amount of crime within the City, as well as the general social experience, was dissatisfying. Therefore, the respondents’ great satisfaction for living in Niverville was partially met due to the dislike of living in Winnipeg.

Commuting

The Tier 2 theme “Commuting” were categorized into 2 themes: “Work trips” (78%) and “Non-work trips” (22%). More detailed information regarding how respondents felt about their commute will be explored later in this chapter.

Housing

The Tier 2 theme “Housing” was coded at 4% and 100% of those responses were positive. Tier 3 themes for “Housing” included “Affordability” (63%), “Lot size” (25%) and “Variety” (13%).

Town Growth

The Tier 2 theme “Town growth” was recorded at 3% of responses for how the community has met expectations. Tier 3 themes for “Town growth” was “Commercial”

(50%), “General” (17%), “Housing” (17%) and “Institutional “ (17%). For example, one respondent shared optimism for commercial growth stating that Niverville has, “...potential for growth in terms of retail establishments (We have a Timmy's! Off to a great start!)”

Economic

The Tier 2 Theme “Economic” was coded the least at 2%. This theme includes Tier 3 Themes “Affordable” when respondents stated that living in Niverville was affordable and “Taxes” when respondents stated that taxes were low or at a reasonable value.

How the community *has not* met expectations

As the majority of respondents indicated that Niverville had met their prior expectations, a group of respondents’ had not had their expectations met. Themes that were coded when a response was negative toward community expectations are similar to themes of satisfaction (See Table 5.11).

Table 5.11: Tier 2 themes for how community has not met expectations

Tier 2 theme	Frequency (Percentage of total coded for how community has <i>not</i> met expectations)
Amenities	31 (44%)
Social	19 (27%)
Economic	8 (11%)
Town growth	6 (8%)
Commuting	5 (7%)
Environment	2 (3%)
Total	71 (100%)

For unsatisfied respondents, “Amenities” was the highest recorded (44%), followed by “Social” (27%) and “Economic” (11%).

Amenities

The Tier 2 theme “Amenities” for how the community has *not* met expectations, was organized into the same 3 themes as Tier 2 “Amenities” for how the community has met expectations (“Commercial”, “Facilities” and “Services”)

Table 5.12: Tier 3 and Tier 4 themes for amenities

Tier 3 theme <i>Tier 4 theme</i>	Frequency (Percentage of total coded for theme of amenities)
Facilities	21 (68%)
<i>Tier 4 themes: recreation, road infrastructure, schools and pipes</i>	
Services	6 (19%)
<i>Tier 4 themes: Water and sewer, correspondence of local officials, daycare</i>	
Commercial	4 (13%)
<i>Tier 4 themes: Hours of operation</i>	
Total	31 (100%)

The themes for “Amenities” are somewhat reversed for how expectations were not met; “Facilities” (68%) surpassing the other themes, “Services” (19%) with the second highest followed by “Commercial” (13%). The highest recorded Tier 4 themes for “Facilities” included “Recreation”, “Road infrastructure”, “Schools” and “Pipes.” One respondent stated that, “spending on community projects has been disappointing. Example: other communities near Niverville had a public splash pad/water play park years before Niverville (yet Niverville is a bigger community).”

Social

The Tier 2 theme “Social” was organized into the same Tier 3 themes as Tier 2 “Social” for how the community *has* met expectations, however with differing themes for Tier 4.

Table 5.13: Tier 3 and Tier 4 themes for social

Tier 3 theme <i>Tier 4 theme</i>	Frequency (Percentage of total coded for the theme of social)
Social (general)	
<i>Crime</i>	6 (32%)

<i>Clique-y</i>	3 (16%)
<i>Isolating</i>	2 (11%)
<i>Religious</i>	2 (11%)
Social (Family/Friends)	
<i>Making friends</i>	2 (11%)
Social (planned activities)	
<i>All ages</i>	1 (5%)
<i>Amount</i>	1 (5%)
<i>Events</i>	1 (5%)
Total	19 (100%)

**Note: Tier 4 themes indicated in italics*

The highest theme recorded was “Crime” (32%) as a reason for not being satisfied with living in Niverville. Other responses included describing people in Niverville as “Clique-y” (16%) and “Isolating” (11%). One response stated that, “the town is too clique-y and I find you are frowned upon for not going to church here or at all.” The remaining themes of community dissatisfaction were “Economic” (11%), which primarily includes complaints of high taxes, “Town growth” (8%), “Commuting” (7%) and “Environment” (3%).

5.6 Work location

The question gathering the work location of respondents was divided into part A and part B. Part A was a multiple choice question asking for the larger area of where one’s workplace is located. Options for areas included: “Winnipeg”, “Town of Niverville”, “Outside of Niverville”, “Another Town of City in Manitoba” or “At home.” Part B was an open-ended question where participants were allowed to indicate the postal code, street, intersection of streets or address of their work location. This information was used to gather a more precise location of a participant’s workplace to determine a more accurate measurement between a participant’s home and work location.

5.6.1 Part A: Area of work location

For part A of this question, respondents were asked, “What area do you work in?” and were instructed to select all locations of their workplaces if they held multiple jobs. Respondents also had an option to indicate “Other” if their workplace location did not fit into these categories or the nature of the job was unique, i.e. travelling jobs.

Table 5.14: Area of work location

Work Location	Frequency (%)
Winnipeg	96 (56%)
Town of Niverville	24 (14%)
Another Town or City in Manitoba	23 (13%)
Outside of Niverville (rural)	15 (9%)
At home (Ex. Telecommute, home-based business, stay at home parent etc.)	10 (6%)
Other:	4 (2%)
Total recorded work areas*	172 (100%)
Total response for question	168 (100%)
Total survey responses	168 (100%)

**Respondents could select multiple work locations*

As shown in Table 5.14, the highest number of workers who live in Niverville work in “Winnipeg” (57%), while the remainder either works in the “Town of Niverville” (14%), “Another town or city in Manitoba” (14%), “Outside of Niverville (rural)” (9%) or “At home” (6%). The 43% of individuals whose workplace is not located in Winnipeg are distributed throughout the southeast region of Manitoba in Niverville, Steinbach or another community.

5.6.2 Part B: Work location by postal code

For part B, participants were asked, “Could you provide either the postal code(s), street name(s), or intersection of streets of where you work?” and “If you indicated yes, list all work locations.” The majority of participants submitted a postal code that was

used to create Table 5.15 and Figure 5.2. This information displays how many respondents work in a specific postal code area.

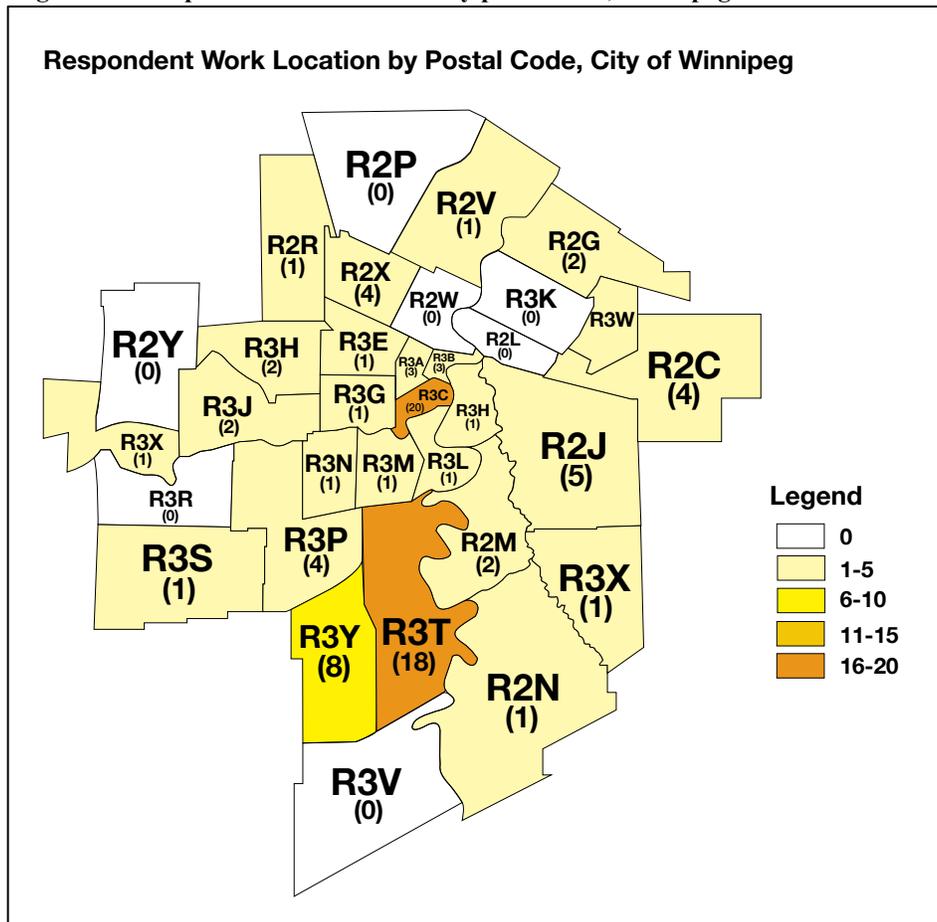
Table 5.15: Work location by postal code

Work Location	Frequency (%)
Winnipeg	90 (64%)
Outside of Winnipeg	50 (36%)
Total jobs recorded*	140 (100%)
2 or more workplace locations	15 (11%) (Of 140 jobs recorded)
Travelling job or various locations	6 (4%) (Of 140 jobs recorded)
Total responses for question	126 (100%)
Total response for question	126 (75%)
Non-response rate	42 (25%)
Total survey responses	168 (100%)

*For “total jobs recorded” this includes responses with multiple workplace locations and travelling jobs with various locations of work

Respondent work location by postal code, City of Winnipeg

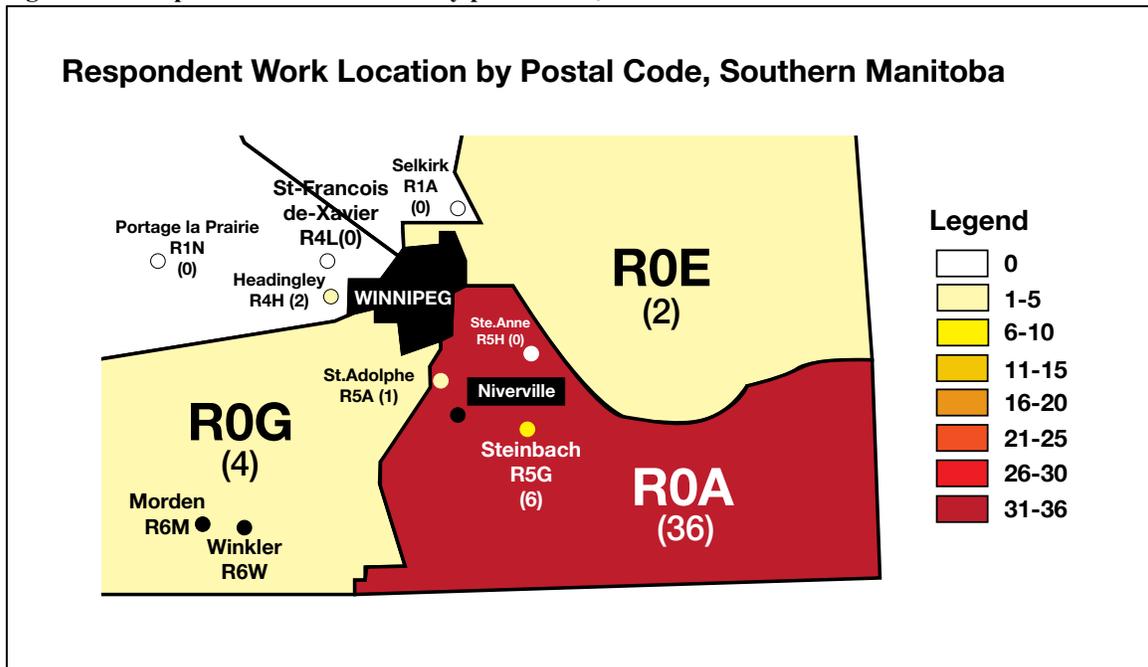
Figure 5.2: Respondent work location by postal code, Winnipeg



The majority of respondents, whose work location is in Winnipeg, work in the R3C postal code area, also known as Downtown Winnipeg (22%). The second highest workplace location in Winnipeg is in the R3T postal code area or the South Winnipeg region (20%).

Respondent work location by postal code, Southern Manitoba

Figure 5.3: Respondent work location by postal code, Southern Manitoba



The majority of work locations, located outside of Winnipeg, are in the ROA postal code area, which covers a portion of the southeast corner of Manitoba (71%) including Niverville and Steinbach (R5G) (12%). There were 6 responses that reported they had various work locations including Steinbach, Brandon, Dugald, Dryden and Thompson.

5.7 Commute mode

For the question regarding the mode of transportation used to get to work, respondents were asked, “How do you get to work everyday?” An option for “A combination of two or more” mode of transport was included as well.

Table 5.16: Commute mode

Mode of Travel	Frequency (%)
Single Occupancy Vehicles (Car)	125 (74%)
High Occupancy Vehicles (Carpool)	10 (6%)
A combination of two or more (For ex. sometimes drive, sometimes walk to work)	7 (4%)
Walk	5 (3%)
Bicycle	2 (1%)
Bus (Park and Ride)	1 (1%)
Total response for question	150 (89%)
Non-response rate	18 (11%)
Total survey responses	168 (100%)
Respondents that work from home	10 (6% of work areas recorded)

The most frequently used mode is the “Car” (74%) with 6% of those using the car engages in “High occupancy vehicle” use (carpooling) as shown in Table 5.16. A small percentage use a “Combination of two or more modes” (4%), a more common commuting behaviour than “Cycling” (1%) and “Busing/park and ride” (1%). Respondents who work from home were shown Table 5.16 under the non-response total as they make up the majority of non-responses for this question.

5.8 Commute time

To determine the length of commute (in time), respondents were asked, “On average, how long does it take you to get to work?” The 5 options to chose from each indicated a segment of time for commute (See Table 5.17).

Table 5.17: Commute time

Duration of commute (minutes, hour)	Frequency (%)
30 – 45 minutes	59 (35%)
15 – 30 minutes	33 (20%)
45 – 60 minutes (1 hour)	28 (15%)
Less than 15 minutes	24 (14%)
More than 1 hour	6 (4%)
Total response for question	150 (88%)
Non-response rate	21 (13%)
Total survey responses	168 (100%)

The highest number of commuters has a commute time between “30 – 45 minutes” (35%) and the second highest number is a commute time between “15 – 30 minutes” (20%).

5.9 Commute enjoyment

The question aimed to determine if respondents enjoyed their commute, and to what degree, was divided into part A and part B. Part A was a multiple choice question that asked for a respondent’s level of enjoyment of their commute. Part B was used to gather a respondent’s feelings as to why they liked, dislike or felt indifferent about their commute.

5.9.1 Part A: Level of commute enjoyment

For part A, respondents were asked, “Do you enjoy your daily commute to work?” Options for this question included: “Always”, “Most of the time”, “About half of the time”, “Sometimes” and “Never” (See Table 5.18).

Table 5.18: Level of commute enjoyment

Level of Enjoyment	Frequency (%)
Most of the time	82 (49%)
Always	29 (17%)
About half of the time	16 (10%)
Sometimes	14 (8%)
Never	5 (3%)
Total responses for question	146 (87%)

Non-response rate	22 (13%)
Total survey responses	168 (100%)

The majority of commuters enjoy their commute “Most of the time” (49%). The second highest percentage enjoy their commute “Always” (17%).

5.9.2 Part B: Liking, disliking or feeling indifferent about commute

For part B, respondents were asked, “Can you provide some reasons as to why you like, dislike or feel indifferent about your commute?” Open-ended responses for this question were coded into 3 themes: (1) “Liking commute” (69%), (2) “Disliking commute” (57%) and (3) “Indifferent about commute” (3%) as shown in Table 5.19.

Table 5.19: Tier 1 themes for liking, disliking or feeling indifferent about commute

Tier 1 theme	Frequency (Percentage of total coded responses)
Liking commute	129 (49%)
Disliking commute	128 (49%)
Indifferent about commute	6 (2%)
Total themes coded	263 (100%)
Total responses for question	140 (83%)
Non-responses	28 (17%)
Total survey responses	168 (100%)

Reasons for liking commute

Reasons for individuals liking their commute were categorized into the following themes: “Road type” (41%), “Activities” (40%), “Mode” (7%) and “Time of day” (2%), shown in Table 5.20.

Table 5.20: Tier 2 themes for liking commute

Tier 2 theme	Frequency (Percentage of total coded for liking commute)
Road type	53 (41%)
Activities	52 (40%)
Length of commute	12 (9%)

Mode	9 (7%)
Time of day	3 (2%)
Total	129 (100%)

Road type

The Tier 2 theme “Road type” refers to the type of roads used for commuting, i.e. city roads or highway roads. Highway driving was recorded as being highly enjoyed by commuters (45%). Furthermore, 64% of those who enjoy highway driving stated they enjoy less traffic on highway roads than city roads. One respondent stated that they are, “never stuck in traffic” and that, “highway driving is relaxing.” 12% also stated they enjoy the scenery of highway driving, for example, “I enjoy the rural part of my commute very much - beautiful scenery, easy highway driving and sometimes glimpses of farm animals.”

Activities

The Tier 2 theme “Activities” was highly coded in terms of respondents liking their commute (44%). “Activities” were categorized into the following themes: (1) “Personal” (90%), (2) “Social” (8%) and (3) “Work” (2%) (See Table 5.21).

Table 5.21: Tier 3 and tier 4 themes for activities

Tier 3 theme Tier 4 theme	Frequency (Percentage of total coded for activities)
Personal	
<i>Unwind</i>	37 (71%)
<i>Listen to music/audiobooks/podcasts</i>	6 (12%)
<i>Drinking coffee</i>	3 (6%)
<i>Reading (passenger or busing)</i>	1 (2%)
Social	
<i>Spend time with family/friends</i>	3 (6%)
<i>Call family/friends</i>	1 (2%)
Work	
<i>Call clients</i>	1 (2%)
Total	52 (100%)

Commuters engaging in personal activities mentioned that the commute helped them “Unwind”, that it was “Relaxing” and a time to “Decompress” after a long work day. Other activities included “Listening to music” (12%), “Drinking coffee” (6%), and “Reading (passenger or busing)” (2%). Social reasons for enjoying their commute included “Spending time with family and friends” or “Calling family and friends.”

Length of commute

The Tier 2 theme “Length of commute” was recorded at 9%. The primary reason as to why respondents enjoy their commute is because it is short. A respondent specified that, “it is short and doesn't bother me” and “I love my 7 minute commute now!”

Mode

Mode was recorded at 9% amongst respondents for enjoying their commute. Tier 3 themes consists of: (1) “Carpooling” (67%) and (2) “Active transportation” (33%).

Table 5.22: Tier 3 and tier 4 themes for mode

Tier 3 theme Tier 4 theme	Frequency (Percentage of total coded for mode)
Carpool	
<i>Social</i>	3 (33%)
<i>Saving money</i>	2 (22%)
<i>Environmentally friendly</i>	1 (11%)
Active transportation	
<i>Health benefits</i>	1 (11%)
<i>Saving money</i>	1 (11%)
<i>Environmentally friendly</i>	1 (11%)
Total	9 (100%)

Respondents mentioned that they enjoy carpooling as a “Social” time with others (33%), as well as “Saving money” (22%) and being an “Environmentally friendly” mode of travel (11%). Respondents who use active transportation to travel to work, either walking

or biking, enjoy the “Health benefits” (11%) in addition to “Saving money” and “Environmentally friendly” travel (11%).

Time of day

A small percentage stated that they enjoy commuting at different times of the day (3%) most often due to the decreased amount of traffic. The Tier 3 categories for “Time of day” included (1) “Prefer morning commute” (1%), (2) “Prefer afternoon commute” (1%) and (3) “Prefer evening commute” (1%). One respondent that preferred evening commute stated that, “I prefer the evening commute as it gives me time to think about my day at work and unwind.”

Reasons for disliking commute

Reasons for individuals disliking their commute were categorized into Tier 2 themes: “Road type” (38%), “Weather” (33%), “Length of commute” (19%), “Cost” (4%), “Other drivers” (3%), “Activities” (2%), “Work location” (1%) and “Childcare (not located in close proximity to residence)” (1%) as shown in Table 5.23.

Table 5.23: Tier 2 themes for disliking commute

Tier 2 theme	Frequency (Percentage of total coded for disliking commute)
Road type	53 (41%)
Weather	46 (36%)
Length of commute	14 (11%)
Cost	5 (4%)
Other drivers	4 (3%)
Activities	3 (2%)
Work location	2 (2%)
Childcare (not located in close proximity to residence)	1 (1%)
Total	128 (100%)

Road type

The majority of responses that coded for Tier 2 theme “Road type” stated that commuters prefer “Highway driving” to “City driving” without a specific reason (62%).

Table 5.24: Tier 3 and tier 4 themes for road type

Tier 3 theme Tier 4 theme	Frequency (Percentage of total coded for road type)
Highway driving	
<i>General*</i>	25 (76%)
<i>Dangerous</i>	5 (15%)
<i>Single lane road</i>	3 (9%)
Total for highway driving	33 (100%)
Highway driving	33 (62%)
City driving	
<i>More traffic</i>	12 (23%)
Other	8 (15%)
Total	53 (100%)

**General was coded when responses only referred to highway driving and no other reason*

Specific reasons include “Dangerous” (15%) and “Single lane roads” (9%). The only specific reason for disliking “City driving” (23%) was “More Traffic” (23%) during rush hour, as one respondent stated, “I do not enjoy driving in the city. I much prefer highway driving with less traffic.”

Weather

The Tier 2 theme “Weather” was the second highest reason for respondents disliking their commute (36%). The highest Tier 3 theme for “Weather” was “Winter conditions” (96%) and Tier 4 themes for “Winter conditions”, included “Danger (11%), “Lack of information” (4%) regarding road conditions and “Missing work” (2%) due to inclement weather. One respondent stated, “in winter it can be difficult and dangerous, route information is not updated in a timely fashion.”

Table 5.25: Tier 3 and tier 4 themes for weather

Tier 3 theme Tier 4 theme	Frequency (Percentage of total coded for road type)
--------------------------------------	----------------------------------------------------------------

Winter conditions	
<i>General*</i>	36 (82%)
<i>Dangerous</i>	5 (11%)
<i>Lack of information</i>	2 (5%)
<i>Missed work</i>	1 (2%)
Total for winter conditions	44 (100%)
Winter conditions	44 (96%)
General	2 (4%)
Total for weather	46 (100%)

**General was coded when responses only referred to winter conditions and no other reason*

The remaining Tier 2 themes for this question include “Length of commute” (19%), “Cost” (4%), “Other drivers” (3%), “Activities” (2%) and “Work location” (1%). The theme “Length of commute” was because commutes are too long and responses coded for “Cost” included the high costs of gas and car insurance. Responses coded for “Activities” consisted of spending less time with family and friends as much of their time is spent commuting to work. Finally, responses coded for “Work location” referred to respondents stating a preference to work in Niverville, however the employment opportunities were limited.

5.10 Living in Niverville’s affect on commute

To determine how living in Niverville affects the commutes of residents, respondents were asked the open-ended question, “How has living in Niverville affected your commute? For example, increased or decreased your commute, changes in how you get to work, or any other lifestyle changes.” Providing examples for respondents to describe the affects of living in Niverville generated responses that stated if their commute had increased, decreased or was unchanged followed by a detailed account of how that affected other aspects of their life.

Table 5.26: Living in Niverville’s affect on commute

	Frequency (%)
Increased	59 (35%)
Decreased	26 (15%)
No Change	36 (21%)
Not applicable	16 (10%)
Total responses for question	137 (81%)
Non-response rate	31 (19%)
Total survey responses	168 (100%)

As shown in Table 5.26, the majority of responses stated that their commute had either “Increased” (35%), “Decreased” (15%), “No change” occurred (21%) or “Not applicable” (10%). In addition, 12% of responses indicated by how many minutes their commute had increased or decreased, as shown in Table 5.27.

Table 5.27: Commute duration increased/decreased segments

Time (minutes, hours)	Frequency (Percentage of total coded)
Increased	
<i>15-30 minutes</i>	10 (6%)
<i>Less than 15 minutes</i>	3 (2%)
<i>30-45 minutes</i>	1 (1%)
<i>45-60 minutes (1 hour)</i>	0 (0%)
<i>More than 1 hour</i>	0 (0%)
Decreased	
<i>Less than 15 minutes</i>	1 (1%)
<i>15-30 minutes</i>	1 (1%)
<i>45-60 minutes (1 hour)</i>	1 (1%)
<i>30-45 minutes</i>	0 (0%)
<i>More than 1 hour</i>	0 (0%)
Total responses indicating commute duration change by time	17 (12%) Out of 137 responses
Total responses of question	
	137 (81%)
Non-response rate	31 (19%)
Total survey responses	168 (100%)

5.10.1 Reasons affecting the commute

There were several reasons that dealt specifically with respondents commutes as being affected by their move to Niverville (See Table 5.28).

Table 5.28: Tier 1 themes for reasons affecting the commute

Tier 1 theme	Frequency (Percentage of total coded for commuting)
Cost	11 (23%)
Mode change	10 (22%)
Highway driving	5 (11%)
Wake up earlier	5 (11%)
Winter conditions (missed work)	4 (9%)
Trip chaining	3 (6%)
Less non work trips	3 (6%)
More non work trips	2 (4%)
Driving arrangements within household	2 (4%)
Change commute route	1 (2%)
Limited local jobs	1 (2%)
Total for Tier 1 themes	47 (100%)
Total for Tier 1 themes	47 (34%)
Remaining responses	90 (66%)
Total responses for question	137 (100%)

Cost

The Tier 3 theme “Cost” was coded at 23% when referring to how living in Niverville affected commute. Tier 4 themes for “Cost” included “Gas” (64%), “Mileage” (18%), “Purchased second vehicle” (9%) and “Parking costs” (9%).

Mode change

The Tier 3 theme “Mode change” was the second highest reoccurring theme at 22%. It was coded when responses mentioned that their modes of transportation had changed as a result of moving to Niverville. Of the 10 coded for this theme, 5 were “Bus to car” mode change (50%), 2 for “Carpool” (20%) and 1 for “Walking or biking to car” (10%). One respondent explained that they, “now have to drive to work where as before I took the city bus” while another respondent stated that, “I cannot bike to work, and we had to get a second vehicle.”

Highway driving

The Tier 3 theme “Highway driving” was coded at 11% for how living in Niverville has affected their commute. Tier 4 themes for “Highway driving” included statements such as “Longer distance, same time” indicating that a respondent’s mileage had increased, however due to faster speed limits on highway roads, the time spent commuting was less (60%). For example, “it has increased my commute in mileage but the time to get to work from home is actually the same...I used to work downtown and lived in south St. vital.”

Reasons shown in Table 5.28, which were recorded less frequently included having to “Wake up earlier” (11%) for commuting, as well as “Trip chaining” (6%) referring to making non-work trips along with their daily commute to save time. One respondent stated, “we will do all of our grocery shopping or other errands prior to leaving the city or on a weekend.”

5.11 Household decisions on neighbourhood and commute

The question seeking to determine household decisions regarding neighbourhood choice and commute was divided into part A and part B. Part A was a multiple choice question that asked whom the general decisions regarding neighbourhood choice and commute were influenced by within the household. Part B was an open-ended question asking respondents how they came to make these decisions within their households.

5.11.1 Part A: Neighbourhood preference amongst household members

For part A, respondents were asked, “When referring to neighbourhood preference, i.e. choosing to live in a community such as Niverville, which of the following is true:” and were given the 4 options, shown in Table 5.29. Respondents were also given the option to fill in an answer if they felt that the choices listed did not apply to their household decision making process.

Table 5.29: Neighbourhood preference amongst household members

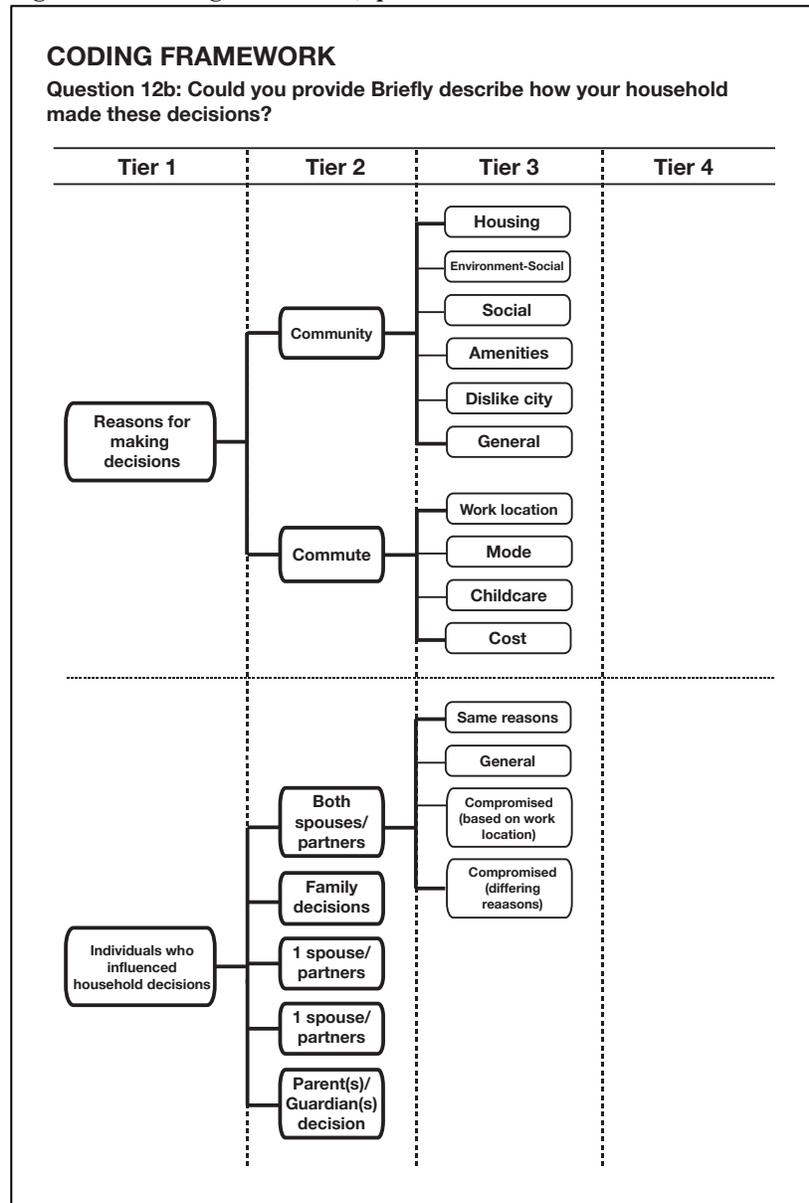
	Frequency (%)
All household members made equal decisions about neighbourhood preference and commute	97 (58%)
You altered your commute based on the neighbourhood preference of others living in your household	17 (10%)
Others in your household altered their commute based on your neighbourhood preference	13 (8%)
Other:	11 (7%)
There is only one person in my household, therefore no decisions on neighbourhood preference and commute were based on the needs/preferences of others	10 (6%)
Total responses for question	148 (89%)
Non-response rate	20 (11%)
Total survey responses	168 (100%)

The majority of respondents reported that their households made “Equal decisions” on neighbourhood and commuting choices (58%). The second highest percentage was “You altered your commute based on the neighbourhood preference of others living in your household” (10%).

5.11.2 Part B: Neighbourhood preference amongst household members

For part B, respondents were asked, “Could you briefly describe how your household made these decisions?” These responses were categorized into the following Tier 1 themes: (1) individuals who influenced household decisions and (2) reasons affecting the decisions made in a household. Figure 5.4 shows the framework for how responses were coded for this question.

Figure 5.4: Coding framework, question 12b



Individuals who influenced household decisions

This Tier 1 theme was recorded when a specific household member had an equal or greater influence for the decisions made within a household.

Table 5.30: Tier 2 themes individuals who influenced household decisions

Tier 2 theme	Frequency (Percentage of total coded for whom household decisions were based on)
Both spouses/partners	39 (38%)
Family decision (entire household)	34 (33%)
1 spouse/partner	21 (20%)
Children	6 (6%)
Parent(s)/guardian decision(s)	3 (3%)
Total themes coded for household decision makers	103 (100%)
Total responses for question	108 (64%)
Non-response rate	60 (36%)
Total survey responses	168 (100%)

“Both spouses/partners” refers to both of the spouses/partners making decisions equally and often compromising when choosing where to live and how to commute to work (38%). “Family decision (entire household)” refers to a household that made decisions based on the entire family, including children (33%). “1 spouse/partner” was recorded when the household made decisions based primarily on one person’s neighbourhood preference or work location (20%). “Children” was recorded when respondents stated that they made decisions based on their desires for the children, for example schooling or the desire to raise their children in a small town (6%). “Parent(s)/guardian decision(s)” is when the parent(s)/guardian(s) made the decisions for the entire household (3%). This differs from “Both spouses/partners” as decisions made by “Parent(s)/guardian(s)” were described by young adults who live with their parents.

Reasoning between spouses/partners

“Both spouses/partners” was the only theme coded into Tier 3 themes, as respondents described this relationship in great detail. Table 5.31, describes how both spouses/partners came to an agreement.

Table 5.31: Tier 3 themes for reasoning between spouses/partners

Tier 3 theme	Frequency (Percentage of total coded for reasoning between spouses/partners)
Same reasons	17 (45%)
General	10 (26%)
Compromised (based on work location)	10 (26%)
Compromised (differing reasons)	1 (3%)
Total themes coded for reasoning	38 (100%)
Total responses for question	108 (64%)
Non-response rate	60 (36%)
Total survey responses	168 (100%)

“Same reasons” refers to a couple having the same reasons for making decisions where no compromise between spouse/partner was needed (45%). “General” describes no specific reason other than both spouses/partners agreed on the decision (26%).

“Compromised (based on work location)” was when spouses/partner’s chose to live in Niverville as it was equidistant between each of their work locations (26%) for example, “It was a half way point for both of us, as I was still working in Winnipeg when we moved and my husband was working out of Steinbach when we first moved.”

“Compromised (differing reasons)” was when each spouse/partner had their own reasons for living in a small community and compromised to live in Niverville (3%), for example, “We knew we wanted to live outside the city eventually as my husband is from a small town but I wanted to be closer to the city.”

Reasons for making decisions

The Tier 1 theme “Reasons for decisions made” was categorized into 2 Tier 2 themes: (1) “Community” (72%) and (2) “Commute” (28%), shown in Table 5.32.

Table 5.32: Tier 1 themes for reasons behind making decisions

Tier 2 theme	Frequency (Percentage of total coded for reasons behind making decisions)
Community	81 (72%)
Commute	32 (28%)
Total themes coded for decision-making	113 (100%)
Total responses for question	108 (64%)
Non-response rate	60 (36%)
Total survey responses	168 (100%)

“Community” was recorded when respondents gave specific examples regarding the community as a reason to live in Niverville and “Commute” was recorded when a response pertained to an individual’s commute as having influenced their decision to live in Niverville. Both “Community” and “Commute” were sorted into multiple themes, which will be explained in the following section.

Community

Table 5.33 shows the themes specifically associated with the “Community” and how respondents made their housing and commuting choices based on reasons pertaining to Niverville.

Table 5.33: Tier 3 themes for community

Tier 3 theme	Frequency (Percentage of total coded for community)
Housing	39 (48%)
Environment-social	15 (19%)
Social	14 (17%)
Amenities	6 (7%)
Dislike city	5 (6%)
General	2 (2%)
Total	81 (100%)

The most frequent theme was housing (48%), as housing was affordable and individuals could afford to spend more money on commuting to work. Respondents enjoy the

benefits of living in Niverville that a lengthy commute is a lifestyle change that they are willing to accept. For example one respondent stated, “we decided that the benefits to living in Niverville outweighed any changes we would have to make in our commute.”

Commute

Table 5.34 shows the themes associated with a respondent’s commute and how they made their housing and commuting choices based on reasons pertaining to their commute.

Table 5.34: Tier 3 themes for commute

Tier 3 theme	Frequency (Percentage of total coded for commute)
Work location	21 (66%)
Mode	4 (13%)
Childcare	4 (13%)
Cost	3 (9%)
Total	32 (100%)

“Work location” (66%) was the most frequent theme, as respondents noted that they moving to Niverville because it is equidistant between household workers work locations. “Mode” (13%) includes those who moved to benefit from mode change, for example changing modes from a car to walking to work. Childcare (13%) includes the locations of schools and daycares that influenced a parent(s)/guardian(s) daily commuting pattern and schedule, for example, “The decision was based on which person can stay and prepare the kids for before daycare in terms of how much commute it will tack on for the other.”

5.12 Moving closer to work location

The question was to determine if respondents would ever consider moving closer to work if the opportunity presented itself. The information gathered summarizes a respondent’s views that living in an exurban neighbourhood is more important than living

closer to work even if their commute was reduced. The question was divided into part A and part B, where part A was a “Yes” or “No” response question and part B was an open-ended question to uncover reasons as to why or why wouldn’t a respondent live closer to where they work.

5.12.1 Part A: Moving closer to work location

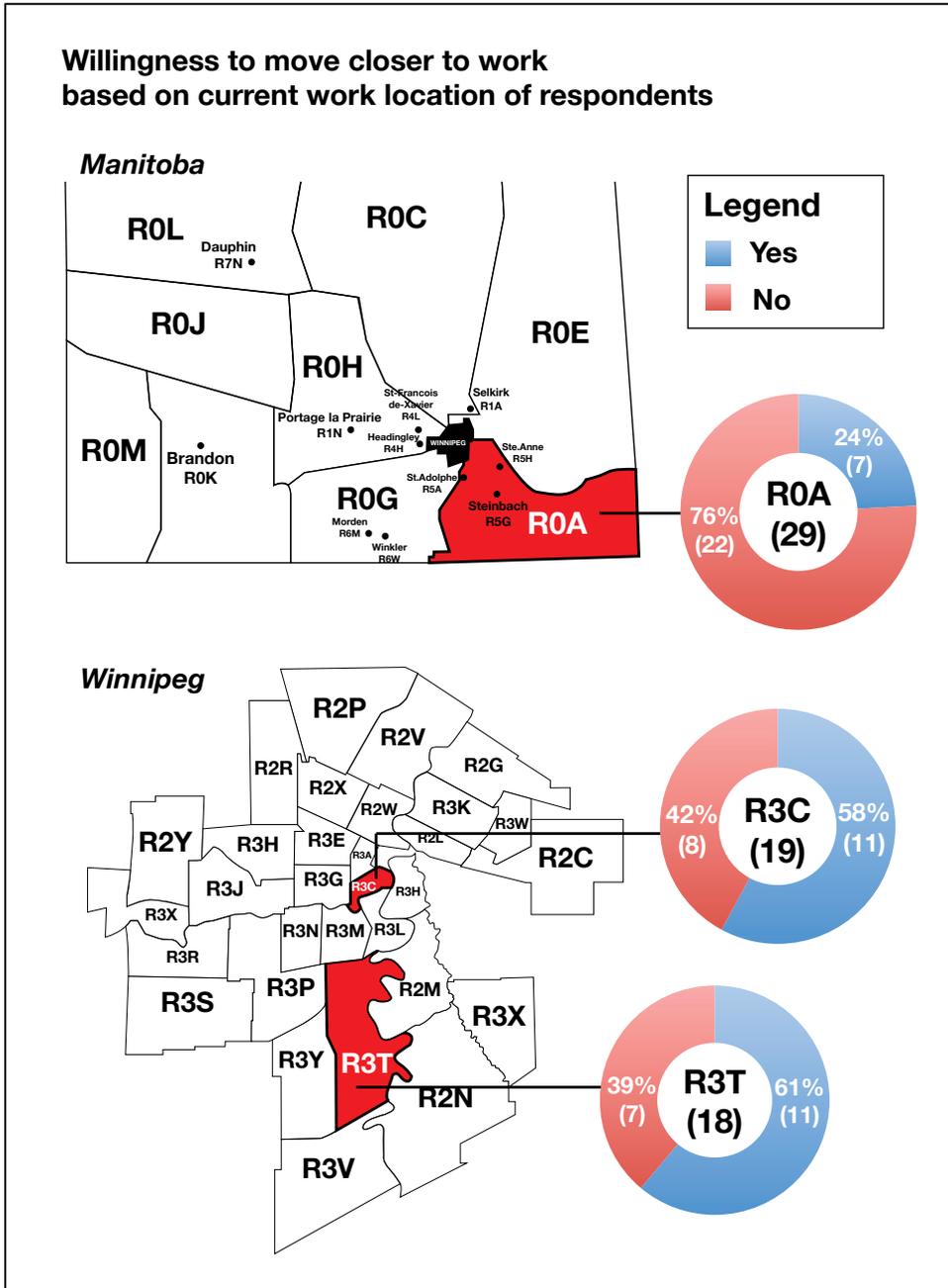
For part A, respondents were asked, “would you ever consider moving to live closer to where you work? The possible options for a response was “Yes”, “No” and “Not applicable”. Table 5.35 indicates that 48% of respondents stated “No”, 36% stated “Yes” and 2% stated “Not applicable”.

Table 5.35: Moving closer to work location

	Frequency (%)
No	81 (48%)
Yes	61 (36%)
Not applicable	3 (2%)
Total response for question	145 (86%)
Non-response rate	23 (14%)
Total survey responses	168 (100%)

The following infographic indicates the level of willingness, “Yes” or “No”, amongst commuters, for wanting to live closer to their work location. The data shown in the doughnut charts is how many workers (%) that work within a certain postal code area, responded with “Yes” and “No” for this question. For this map, only the 3 highest recorded work place locations by postal coded were used.

Figure 5.5: Willingness to move closer to work, Manitoba and Winnipeg



The highest number of work locations is in postal code R0A (southeast Manitoba region), and of those workers, 29 gave responses to this survey question, and results consisted of “Yes” (24%) and “No” (76%). The second highest work location is the R3C postal code area (Downtown Winnipeg) with a total of 19 responses, to which 58% responded “Yes”

and 42% responded “No”. The third highest area is R3T (Fort Garry, South Winnipeg), with a total of 18 responses consisting of 61% stating “Yes” and 39% stating “No”.

5.12.2 Part B: Moving closer to work location

Part B for this question, asked respondents, “If you answered yes or no, why or why not?” Reasons for why respondents answered “No” consisted of 48% of all responses and reasons for why respondents answering “Yes” was 42% of all responses, as seen in Table 5.36.

Table 5.36: Tier 2 themes for moving closer to work location

Tier 2 theme	Frequency (Percentage of total coded for moving closer to work location)
No	78 (48%)
Community	64 (82%) Out of 78 responses
Commute	14 (18%) Out of 78 responses
Yes	56 (42%)
Community	24 (43%) Out of 56 responses
Commute	32 (57%) Out of 56 responses
Total themes coded	134 (100%)
Total responses for question	121 (72%)
Non-response rate	47 (28%)
Total survey responses	168 (100%)

Tier 2 themes for both “No” and “Yes”, consist of (1) “Community” and (2) “Commute”. As discussed in question 12 part B, “Community” was recorded when respondents gave reasons pertaining to the community for why they would or would not move closer to their work location and “Commute” was recorded for reasons pertaining to a respondent’s commute for why they would or would not move closer to work.

Reasons why residents *would not* move closer to work location (no)

Community

As previously stated, responses were coded when a respondent answered “No” for part A, and for part B gave reasons that referenced the “Community” for why they would not want to move closer to their work location (82%), seen in Table 5.37.

Table 5.37: Tier 2 themes for community (no)

Tier 2 theme	Frequency (Percentage of total coded for theme of community, no)
General	24 (50%)
Social	10 (21%)
Environment-social	5 (10%)
Housing	5 (10%)
Amenities	4 (9%)
Total	48 (100%)

The highest coded for “Community” was general (38%) which included responses with a broad satisfaction about the community, for example “I love Niverville... My family is very happy here.”

Commute

“Commute” was recorded when a respondent answered “No” for part A, and for part B gave reasons that referenced their “Commute” as to why they would move closer to their work location (18%). Reasons mainly consisted of their commute being already short, they are use to travelling long distances, it is a mid-point between work locations for a multiple worker household and they would change jobs over moving closer to work. For example, one respondent stated, “If anything I would change jobs to be closer,” along with others who expressed that they prioritize their properties and the community of Niverville over decreasing their commute time.

Reasons why residents *would* move closer to work location (yes)

Commute

Responses were coded when a respondent answered “Yes” for part A, and for part B gave reasons that referenced their “Commute” for why they would want to move closer to their work location (57%), as seen in Table 5.38.

Table 5.38: Tier 2 themes for commute (yes)

Tier 2 theme	Frequency (Percentage of total coded for theme of commute, yes)
Decrease commute	19 (59%)
Cost	8 (25%)
Mode	3 (9%)
Winter conditions	2 (7%)
Total	32 (100%)

The highest coded reason was to decrease their commute time (59%). Second highest was cost (25%) specifically “gas” and “wear and tear of vehicle.” The third highest was to change their mode of travel to walking, biking or carpooling (9%) and lastly to avoid long commutes in harsh winter conditions (7%).

Community

Responses were coded when a respondent answered “Yes” for part A, and for part B gave reasons that referenced the “Community” for why they would want to move closer to their work location (43%) as seen in Table 5.39.

Table 5.39: Tier 2 themes for community (yes)

Tier 2 theme	Frequency (Percentage of total coded for theme of community, yes)
Amenities	7 (29%)
Housing	6 (25%)
Social	5 (21%)
Environment-social	3 (13%)
Dislike city	2 (8%)
General	1 (4%)
Total	24 (100%)

The highest coded for “Community” was “Amenities” (29%) that included benefiting from the variety of amenities available in the City, for example, “better stores in Winnipeg and service”. “Housing” was the second highest coded (25%), as respondents noted the affordability of housing in Niverville, especially compared to other nearby rural communities, for example “But other communities closer to work were more expensive to live.” The third highest reason was “Social” (21%) which mainly consisted of living closer to family/friends, for example, “My husband may one day want to move to Winnipeg to be closer to work and family as they age.” Other reasons were not highly coded, however it is worth noting that those who mentioned they would move closer to work would not want to live in the City but in a nearby rural area, for example, “Looking for rural type living, but not directly into Winnipeg.”

5.13 General themes on living in Niverville

When survey respondents were asked if they had an additional comments on their experience living in Niverville thus far, the majority of comments were positive. Out of the 50 responses recorded, 84% were positive. The majority of positive responses pertained to the community as a whole and their satisfaction with living there.

Respondents also discussed the implications that a longer commute has had on their lifestyle, however they were still highly satisfied with living in Niverville. One respondent stated, “Sometimes I wish we still lived in the city, however, adjusting to the small town feel and the commute has been easy as our neighbors have been friendly, the people that we have met have become fast friends and I feel like we didn't have that sense of community in the city...The commute is just something that comes with the territory. I

really wouldn't change the fact that we live here. The housing was/is affordable and I really love that we have made our house our home.” Other responses mentioned the balancing act of time management for social and household obligations, for example, “Living in Niverville has forced me to balance my free time better, i.e., if I have plans in the evening after work, I will tend to try to stay in the city rather than, drive home and drive back to the city, etc. This has proven to create challenges...nothing major, but challenges none the less.”

6.0 ANALYSIS

The following chapter provides an analysis of the findings presented previously. This analysis explores the factors that affect respondents' commuting patterns, preferences for living in Niverville and their household decision-making process regarding where to live and how to commute. First, the analysis investigates the commuting patterns and characteristics of respondents, specifically comparing respondents' work location with commute time and level of commute enjoyment, as well as comparing commute mode with the level of commute enjoyment. Second, respondent work location was tested as a factor that could be affecting respondent reasons for living in Niverville and their community expectations. The amount of years a respondent has lived in Niverville was also assessed as having influenced respondent reasons for living in Niverville, their community expectations and their willingness to move closer to their work location. Lastly, work location was compared with respondents' household decision-making, to determine if work location influences the household decision-making process of where to live and how to commute.

6.1 Commuting patterns and characteristics of respondents

The data collected from the survey respondents revealed that 56% of Niverville exurbanites are commuting to Winnipeg. This signifies that the work locations of Niverville residents are located in a variety of areas in the Eastman region of Manitoba, as the majority of non-Winnipeg commuters are working in the R0A postal code area (Southeast Manitoba). To explore beyond this statistic, I will begin to identify the factors that affect exurban commutes to determine not only *where* a person commutes but *how*

they commute, by defining their commuting characteristics and what influences those characteristics.

As outlined in the findings chapter, the most frequently recorded work locations were in the form of a postal code area. These areas are heavily referenced throughout the analysis chapter (See Figure 6.1).

Figure 6.1: Postal code area work locations (most frequently recorded)

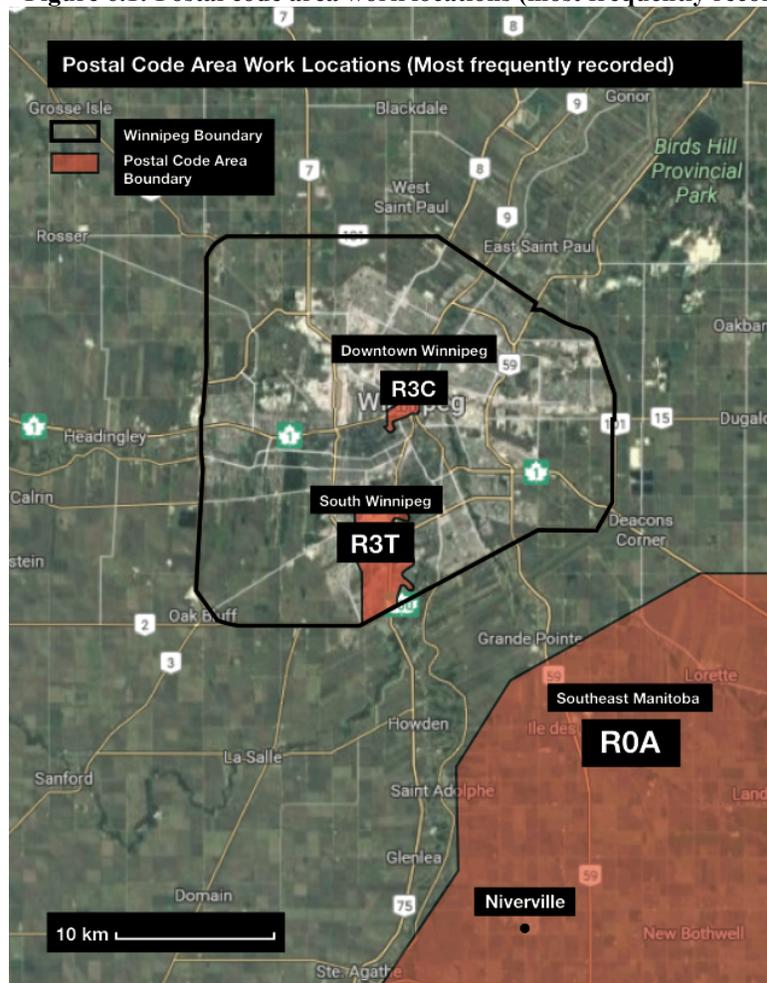
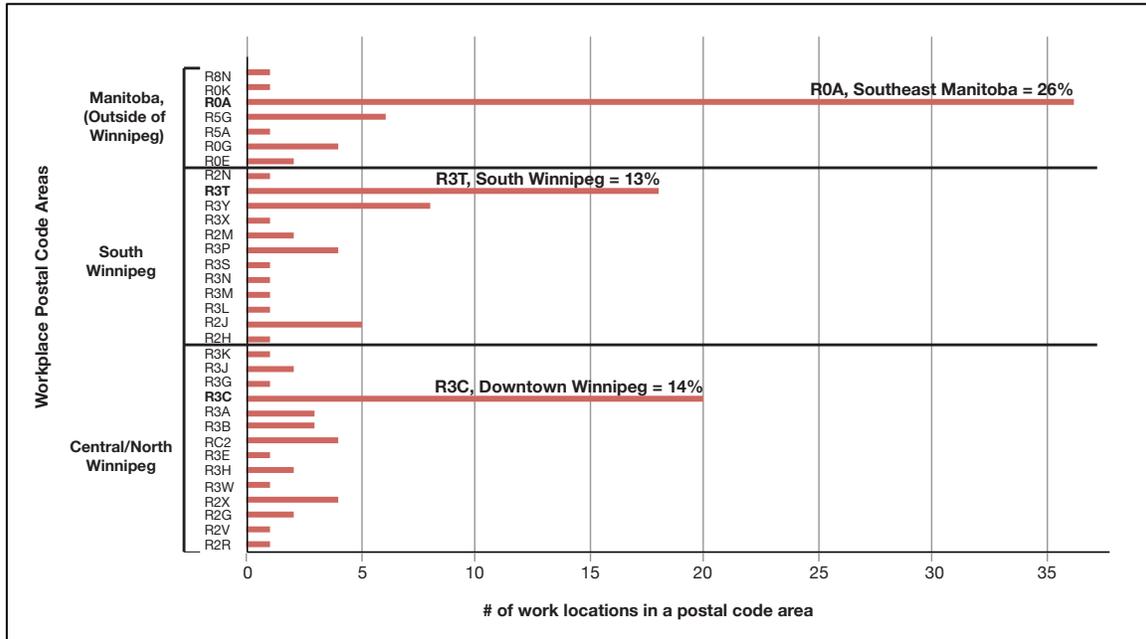


Image source: Google maps (adapted by author)

Amongst all workplace locations of respondents, 3 areas were the most recorded:

- (1) R0A, Southeast Manitoba (which includes Niverville),
- (2) R3T, South Winnipeg and
- (3) R3C, Downtown Winnipeg.

Figure 6.2: Work location by postal code area



**Note: For the purposes of classifying postal code areas, North and South Winnipeg were delineated by the TransCanada Highway (No.1). If a postal code area were located on both sides of the Highway, whichever side contained the most surface area of that postal code would be grouped on the corresponding side. For example, R2J postal code area is located on both sides of the highway, however more surface area exists on the South of the highway therefore it was grouped with the South Winnipeg postal codes.*

Not only were these 3 areas the most frequently recorded, they also represent 3 distinct regions in the Niverville-Winnipeg commuter shed, as determined by the survey data. R0A is Southeast Manitoba, which contains Niverville, R3T represents a large area in South Winnipeg, and R3C covers the majority of Downtown Winnipeg.

6.1.1 Work location compared to commute time

Respondent commute times were evaluated within each postal code work location in addition to being compared with the survey average for commute time (See Table 6.1).

Table 6.1: Work location by postal code area compared to commute time

Work location by postal code	Commute time						Total
	Less than 15 minutes	15 - 30 minutes	30 - 45 minutes	45 - 60 minutes (1 hour)	More than an 1 hour	No response	
R0A (Southeast Manitoba)	17 (49%)	9 (25%)	4 (11%)	1 (3%)	2 (6%)	2 (6%)	35 (100%)

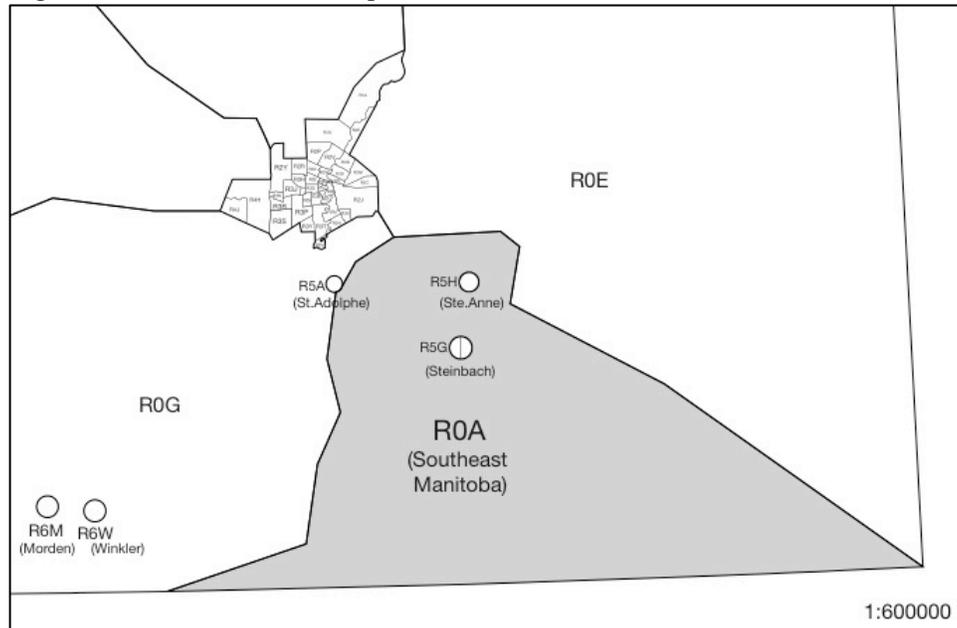
R3T (South Winnipeg)	0 (0%)	9 (50%)	8 (44%)	0 (0%)	1 (6%)	0 (0%)	18 (100%)
R3C (Downtown Winnipeg)	0 (0%)	1 (5%)	6 (30%)	11 (55%)	2 (10%)	0 (0%)	20 (100%)
Total	17	19	18	12	5	2	73
Survey Average	24 (14%)	33 (22%)	59 (35%)	28 (15%)	6 (4%)	21 (13%)	168 (100%)

**Percentages for each cell were calculated from the column total*

The majority of respondents who work in the R0A (Southeast Manitoba) postal code area stated that their commute time was less than 15 minutes (49%). This differs from the survey average of 30 – 45 minutes (35%). The high percentage of respondents having a commute time less than 15 minutes is not surprising as the R0A area is where Niverville is located, indicating that the time to commute between home and work may be significantly shorter than the average respondent’s commute. The high variance in commute times, for respondent’s working in the R0A area, can be explained by a few different reasons. Of the 4 respondents that had a commute time of 30 – 45 minutes, 2 stated that they had 2 separate workplaces, each located in a different postal code area. One respondent stated that they had a 45 – 60 minute (1 hour) commute, which is plausible as they listed 2 separate work locations, 1 in R0A, and 1 in R3A, which is in North Winnipeg near Downtown. The 2 respondents that stated that they had a commute time of more than 1 hour, had multiple job locations throughout Manitoba, with statements expressing that their “commute is around Manitoba – the remainder is to Thompson, Brandon, Steinbach” and “commute is from Dugald to Dryden.” Another explanation that could describe a long commute in the R0A area may be due to its large geographical size (7,755.72 km², 775,572 Ha), which could generate a variety of commute times (Province of Manitoba, 1997) (See Figure 6.3). It is also worth mentioning that the limitation of this survey is that respondents are asked to list all work

locations, however are only allowed to select one commute time, which could explain the large variance in commute times.

Figure 6.3: Postal code area map, Southeast Manitoba



Province of Manitoba, Manitoba Land Initiative (1997), Postal Codes (adapted by author)
**To calculate the total area of R0A, R5H Ste. Anne and R5G Steinbach were excluded from the calculation*

The majority of respondents who work in the R3T (South Winnipeg) postal code area stated that their commute time was between 15 – 30 minutes (50%) and the second highest commute time was between 30 – 45 minutes (44%). As these 2 categories create 94% of the commute time data for R3T commuters, it is appropriate to define the R3T commute as ranging between 15 – 45 minutes. Seeing as Niverville is approximately 30 kilometers from the South perimeter of Winnipeg, 15 minutes may appear as not enough time to make that commute and 45 minutes being too much time for that commute. A reason for this larger range in commute time may be due to the large geographical area of R3T (26.42 km², 2,642 Ha) compared to other postal areas in Winnipeg including the R3C area, which is only 2.87 km² (287 Ha) in size (Province of Manitoba, 1997).

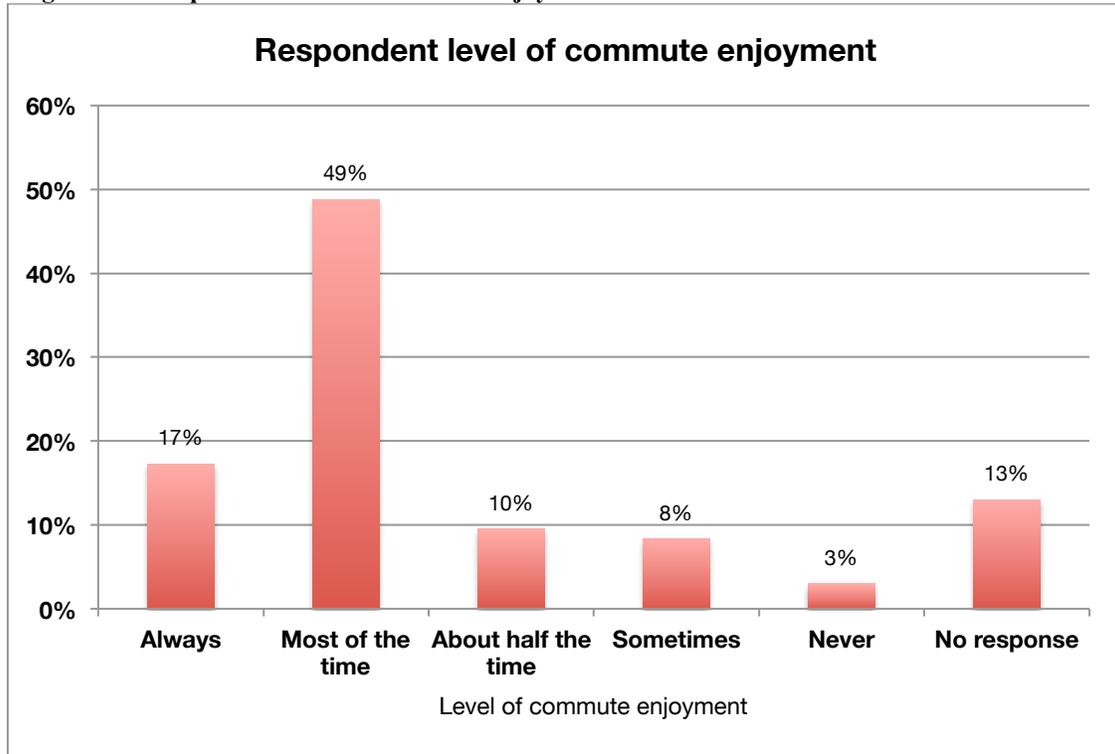
Therefore, commute times may vary depending on where exactly a respondent works in such a large area. Another cause may be due to a respondent commuting before, during or after rush hour, which may alter the amount of traffic a commuter experiences once they reach City limits. In addition, highway driving parameters, which often includes less vehicles and higher speed limits, may also cause a decrease in commute time, while city driving conditions, consisting of more vehicles and slower speed limits, could increase commute time. One respondent, that had a commute time of more than 1 hour, stated that they have 2 separate work locations, 1 in the R3T area (South Winnipeg) and 1 in the R3C area (Downtown Winnipeg). In this case, the commute time of over an hour could be referring to the work location in the R3C area, not the R3T area.

Most of the respondents who work in the R3C (Downtown Winnipeg) postal code area stated that their commute time was between 45 – 60 minutes (1 hour) (55%), which seems appropriate given that the R3C area is the furthest work location from Niverville in distance. The second highest commute time for R3C commuters was between 30 – 45 minutes (30%) and the third was a commute time of more than 1 hour (10%). One respondent stated that they had a commute time between 15 – 30 minutes, however it appeared as though the respondent may have selected the amount time it would take to travel from one work location to another, as the respondent listed 2 work locations, 1 in the R3C area and the other in the R2C area located in Transcona (R3C is approximately 11 kilometers away from R3C according to the Manitoba postal code map from the Manitoba Land Initiative, 1997).

6.1.2 Work location compared to level of commute enjoyment

As shown in the findings chapter, the majority of all respondents stated that they enjoy their commute “Most of the time” (49%), with the second highest being “Always” (17%) and third highest “About half of the time” (10%) (See figure 6.4).

Figure 6.4: Respondent level of commute enjoyment



The majority of commuters working in the R0A (Southeast Manitoba) area stated that they enjoy their commute “Most of the time” (41%) and “Always” (41%) (See Table 6.2).

Table 6.2: Work location by postal code area compared to commute enjoyment

Commute enjoyment							
Work location by postal code	Never	Sometimes	About half the time	Most of the time	Always	No Response	Total
R0A (Southeast Manitoba)	0 (0%)	2 (6%)	2 (6%)	15 (41%)	15 (41%)	2 (6%)	36 (100%)
R3T (South Winnipeg)	1 (6%)	0 (0%)	2 (11%)	13 (72%)	2 (11%)	0 (0%)	18 (100%)
R3C (Downtown Winnipeg)	0 (0%)	2 (10%)	5 (25%)	12 (60%)	1 (5%)	0 (0%)	20 (100%)

Total	1	4	9	40	18	2	74
Survey Average	5 (3%)	14 (8%)	16 (10%)	82 (49%)	29 (17%)	22 (13%)	168 (100%)

**Percentages for each cell were calculated from the column total*

This high level of satisfaction could be due to several survey respondents indicating that they enjoy highway driving (41%) as part of their commute, which is more prevalent when commuting in the R0A area. Respondents enjoy highway driving because of the rural scenery, higher speed limits and the decrease in traffic compared to City driving.

The majority of commuters working in the R3T (South Winnipeg) area stated they enjoy their commute “Most of the time” (72%), with the second highest being both “Always” (11%) and “Sometimes” (11%). The R3T area was the only area of commuters that had one respondent state that they “Never” enjoy their commute (6%). Overall the results for R3T and R3C commuters are similar, however more R3T commuters indicated that they enjoy their commute “Most of the time” (72%) than R3C commuters (60%) and more R3C commuters stated that they “Always” (11%) enjoy their commute than R3T commuters (5%). According to this analysis, there is a correlation between commute time and commute enjoyment, in that a shorter commute is a more enjoyable commute, however not by much. More R3C commuters selecting “Always” (11%) than R3T commuters (5%) may indicate that individuals with further commutes have grown to enjoy components of their commute. Several components were identified in the open-ended questions including how respondents enjoy “Unwinding”(71%) after a busy work day, “Listening to music/audiobooks” (12%) and “Less traffic” with highway driving (64%).

6.1.3 Commute mode compared to level of commute enjoyment

As the number of car commuters far outweighs the usage of other modes, each mode will be evaluated separately for level of commute enjoyment and will not be compared with the survey average (See Table 6.3).

Table 6.3: Commute mode compared to level of commute enjoyment

Commute enjoyment						
Commute mode	Never	Sometimes	About half of the time	Most of the time	Always	Total
Car	6 (5%)	9 (7%)	16 (13%)	72 (57%)	22 (18%)	125 (100%)
Carpool	0 (0%)	4 (45%)	1 (11%)	2 (22%)	2 (22%)	9 (100%)
Walk	0 (0%)	0 (0%)	0 (0%)	2 (40%)	3 (60%)	5 (100%)
Bicycle	0 (0%)	0 (0%)	0 (0%)	1 (50%)	1 (50%)	2 (100%)
Bus (Park and Ride)	0 (0%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)
A combination of two or more modes	0 (0%)	1 (14%)	2 (29%)	3 (43%)	1 (14%)	7 (100%)
Total	6	14	19	88	29	149

**Percentages for each cell were calculated from the column total*

The majority of carpool users “Sometimes” (45%) enjoy their commute, followed by “Most of the time”(22%) and “Always” (22%) liking their commute. Even though respondents have listed several reasons as to why they enjoy carpooling, i.e. saving money, social interaction and participating in environmentally-friendly transportation practices, this comparison indicates that carpooling still contained mixed evaluations. One carpool commuter stated, “Carpool saves a chunk of money, but then I don't get the quiet time (which is tough).” According to the open-ended responses, getting quiet time during one’s commute is the most popular reason amongst all respondents as to why they like their commute (71%). Respondents value their time alone to “Decompress” and “Unwind” after a long and busy work day, to which is not always experienced when carpooling.

In addition, a connection also exists between liking a commute and participating in active transportation when commuting. Most respondents who walk to work stated they “Always” (60%) or “Most of the time” (40%) enjoy their commute. Similarly, those who cycle to work stated that they “Always”(50%) and “Most of the time”(50%) enjoy their commute. A combination of modes contains a slightly lower liking of commute, as the majority of respondents reported that they enjoy their commute “Most of the time” (43%) and “About half the time” (29%).

This section of the analysis, along with data from the findings, beings to answer the research question, “What are the commuting patterns of Niverville residents?” The first hypothesis of the research is true, as work locations of Niverville commuters are decentralized from Winnipeg as individuals are commuting to various areas in the southeast region, and because of this, their commutes are not always longer than a commuter living in a large urban area. The findings and analysis also conclude that exurban commuters highly enjoying their commutes for a variety of reasons. Some of the most recorded reasons include highway driving due to rural scenery and less traffic, as well as commuting alone, which in turn has created mixed opinions regarding the use of carpooling.

6.2 Preferences for living in Niverville

Identifying the preferences for living in Niverville was one of the primary objectives of this research. Understanding why residents want to live in the exurban community of Niverville will further explain the relationship between residential location choice and commuting for this case study. Two questions in the survey aimed to uncover

community satisfaction among respondents. One question gathered respondents reasons for living in Niverville and the other question gathered community expectations prior to moving there. To take this data one step further, I analyze factors that could influence respondents' preferences for living in Niverville as well as their community expectations of Niverville. First, respondent work location was compared with their reasons for living in Niverville and community expectations to determine if work location affected any of their perspectives on Niverville. Second, respondent time (years) living in Niverville was compared with their reasons for living in Niverville, community expectations of Niverville and willingness to move closer to work, to determine if their time living in Niverville had influenced their opinions on the community.

6.2.1 Work location compared to preferences for living in Niverville

Work location has proved to be an influential factor when defining commuting patterns and characteristics. Preferences of the community amongst respondents were also be influenced by work location, which reveals more on the relationship between commuting and residential location.

Reasons for living in Niverville

As outlined in the findings chapter, the most popular reason for living in Niverville was because it is a “Good place to raise a family” (18%). The second highest reason was due to Niverville’s “Affordable Housing” (17%) and the third highest was that Niverville contained a “Good community atmosphere” (14%). These percentages however vary amongst respondents that work in a particular area; R0A (Southeast Manitoba), R3T (South Winnipeg) or R3C (Downtown Winnipeg) (See Figure 6.1).

Figure 6.5: Work location compared with reasons for living in Niverville

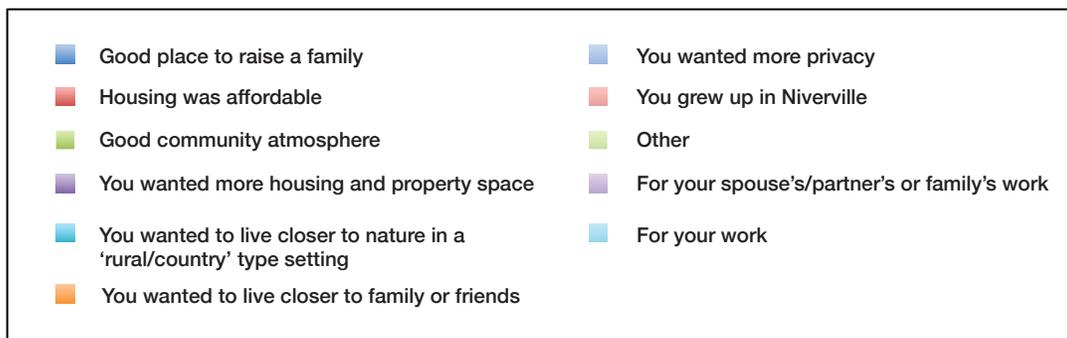
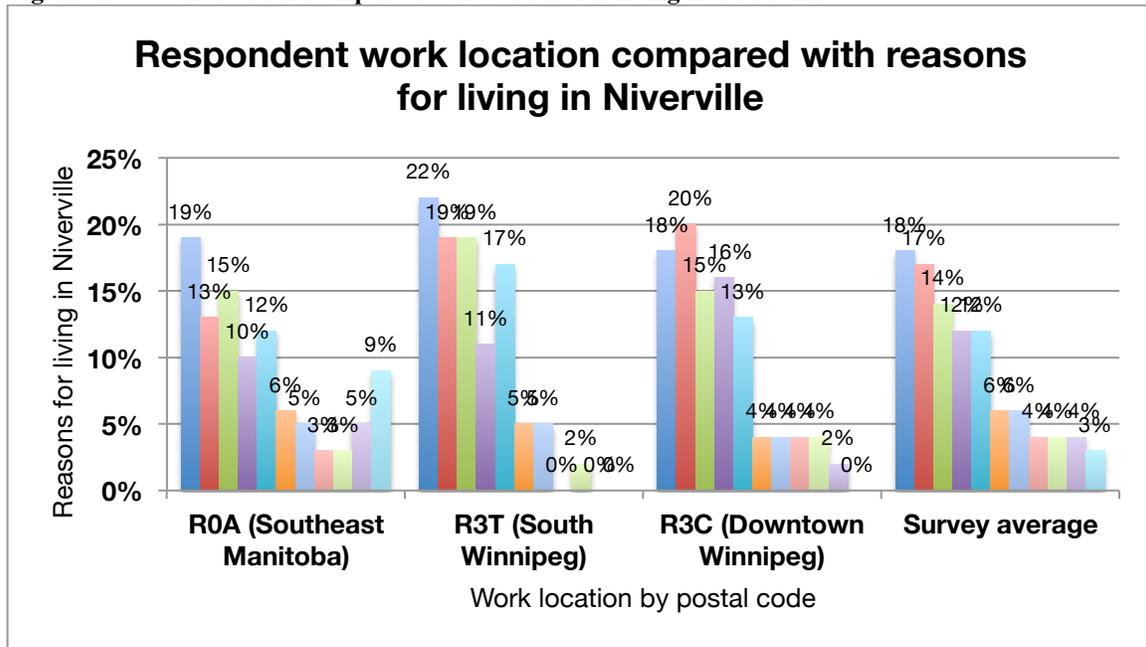


Figure 6.4 illustrates how a respondent's work location can affect their preferences for living in Niverville. The comparison included the 3 most recorded work locations as described earlier, R0A (Southeast), R3T (South Winnipeg) and R3C (Downtown Winnipeg) in addition to the survey average of the question regarding respondent reasons for living in Niverville.

R0A (Southeast Manitoba) respondents exhibited similar ranking order as the survey average, however the second highest percentage was “Good community Atmosphere” (15%) as opposed to the second highest for the survey average of “Good place to raise a family” (13%). Respondents that indicated that they wanted to live in a “Rural/country type setting” (12%) scored higher than respondent’s wanting “More housing and property space” (10%), which also differs from the survey average. This signifies that R0A workers have a higher preference amongst the survey average when comparing percentage rank order, for living in a good community atmosphere as well as wanting to live in a rural environment.

R3T (South Winnipeg) workers, indicated a significantly higher percentage for “Wanting to live in a rural/country type setting” (17%) than wanting “More housing and property space” (11%) in addition to a much higher percentage than R0A (12%) and R3C (13%) workers for the “Rural/country type setting” category. Opposite of R0A workers, R3T workers are not always exposed to natural environments in their work atmosphere and therefore may desire it at home. As well, 0% of R3T respondents chose “For your spouse’s/partner’s or family’s work” and “You grew up in Niverville”, which could indicate their social, and economic, ties to the community are less than those who work in the R0A and R3C areas. An explanation for this is unknown, as further research may be needed to determine a specific correlation between work location and social connections to the community.

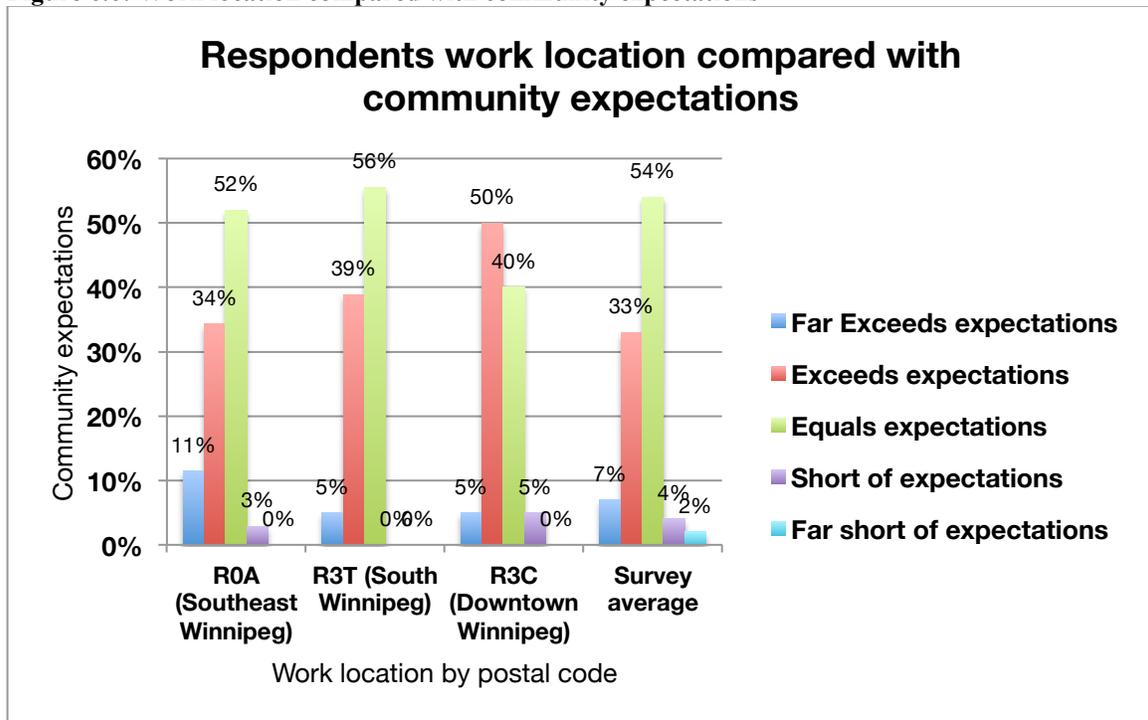
R3C (Downtown Winnipeg) respondents scored higher for “Affordable housing” (20%) than “Good place to raise a family” (18%), which is the inverse of the first and second highest for the survey average. As well, 4%, a higher amount than R0A workers

at 3%, stated they chose to live there because they “Grew up in Niverville.” This could explain why some R3C commuters chose to live in Niverville at the expense of a longer commute time, for they may have nostalgic attachments to the Town and may wish to raise a family there.

Community Expectations

When respondent community expectations were compared to work location, the results did not show much deviation from the survey average, except for respondents working in the R3C area (Downtown Winnipeg) (See Figure 6.6).

Figure 6.6: Work location compared with community expectations



R3C workers had the opposite first and second highest responses than the survey average, with the highest as “Exceeding expectations” (50%) and second highest as “Equals expectations (40%). This may be explained by the group of R3C workers that

grew up in Niverville, being persistent on continuing to live in Niverville, no matter how much time their commute may be. R3C respondents may also feel as though the community portrays a contrasting rural environment to the dense urban environment of Downtown Winnipeg, which could signify the exurban desire to escape City life when an opportunity arises.

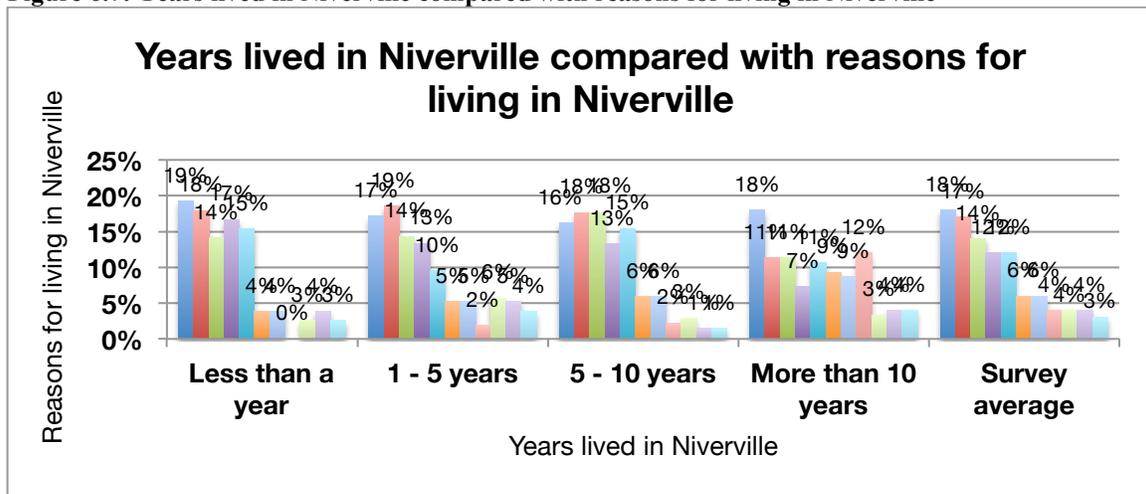
6.2.2 Time lived in Niverville compared to preferences for living in Niverville

Reasons for why respondents wanted to live in Niverville, their community expectations of Niverville and if they would ever move closer to work, were compared with the years that residents have lived in Niverville. For this evaluation, new residents were respondents that selected less than a year and 1 – 5 years (between 0 – 5 years), and long-time residents were respondents that selected 5 – 10 years and more than 10 years (5 or more years).

Reasons for living in Niverville

As previously outlined, the top 3 reasons for wanting to live in Niverville were “Good place to raise a family”(50%), “Affordable Housing”(47%) and “Good community atmosphere”(39%). These reasons varied between new and long-time residents (See Figure 6.7).

Figure 6.7: Years lived in Niverville compared with reasons for living in Niverville



For new residents, specifically respondents who have lived in Niverville for 1 – 5 years, recorded “Affordable housing” (19%) as the highest response and the second highest as “Good place to raise a family” (17%). Meanwhile, respondents living there less than a year had the opposite percentage ranking of “Good place to raise a family” at 19% and “Affordable Housing” at 18%. Seeing as the majority of respondents have been living in Niverville for 1 – 5 years, it is plausible that they moved there for affordable housing more so than less than a year residents did, as prices for housing in Niverville are increasing due to rising demand. However, as prices may be slowly increasing, the need for “More housing and property space” (17%), is the highest amongst less than a year respondents than all other year categories, which suggests that larger properties in

Niverville may cost less than properties in Winnipeg. In addition, 0% of less than a year respondents, had grown up in Niverville. The percentages of growing up in Niverville are the highest for residents living there for more than 10 years and slowly decline as time passes, showing that newcomers are moving in for reasons other than previously living there and being closer to family and friends.

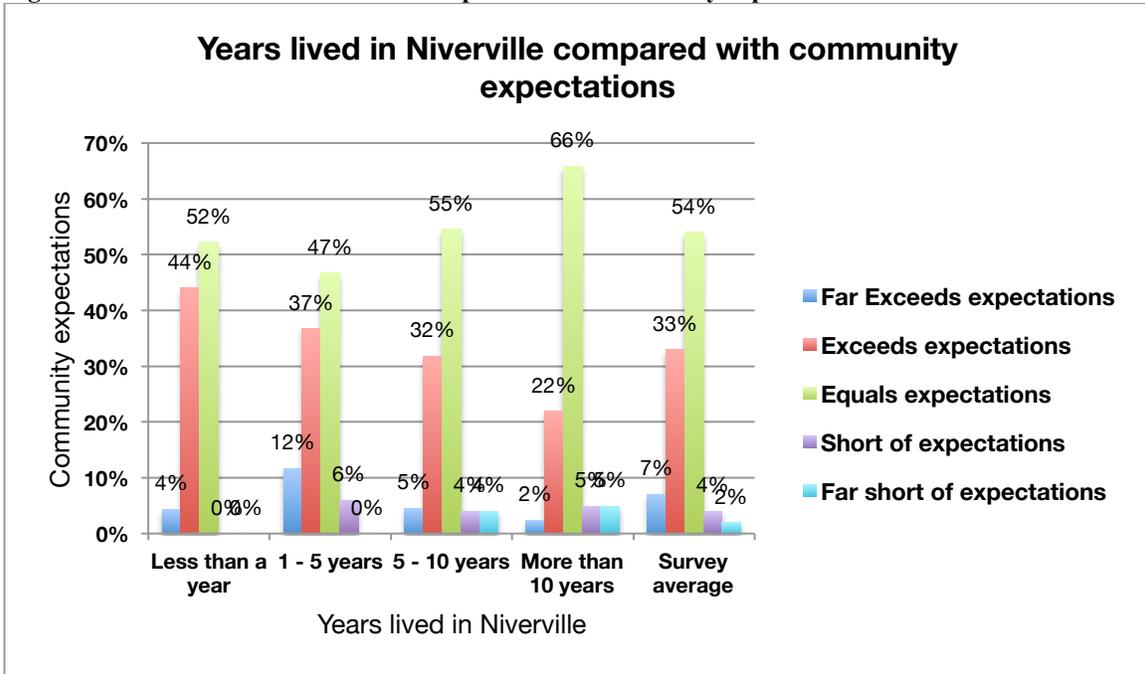
The long-time residents, specifically 5 – 10 year respondents, had the same first and second place rankings as the 1 -5 years residents, where “Affordable Housing” (18%) was higher than “Good place to raise a family” (16%). This further illustrates that the population growth between 2006 and 2016, as shown in the Census programs, as well as the physical development maps over the last 20 years (See *context* chapter), has created a large increase in residential and commercial development in Niverville.

Lastly, the residents living in Niverville for more than 10 years displayed the highest counts for the following preferences: “Wanting to live closer to family or friends” (9%), “Wanted more privacy” (9%), and “Grew up in Niverville” (12%). This indicates several things, first of which is that people who moved to Niverville over 10 years ago may have had family or friends in Niverville as many of them grew up in Niverville. Second, over 10 years ago, there was a lot less people and physical development in Niverville causing newcomers at the time to seek more privacy than those who have moved there recently. Another interesting item to note is that “Affordable housing” was only coded at 11% for those residents of more than 10 years, indicating that housing was not as expensive in Winnipeg as it is today.

Community Expectations

The new and long-time residents overall produced similar data to the survey average, however one notable pattern in the data is present (See Figure 6.8).

Figure 6.8: Years lived in Niverville compared with community expectations

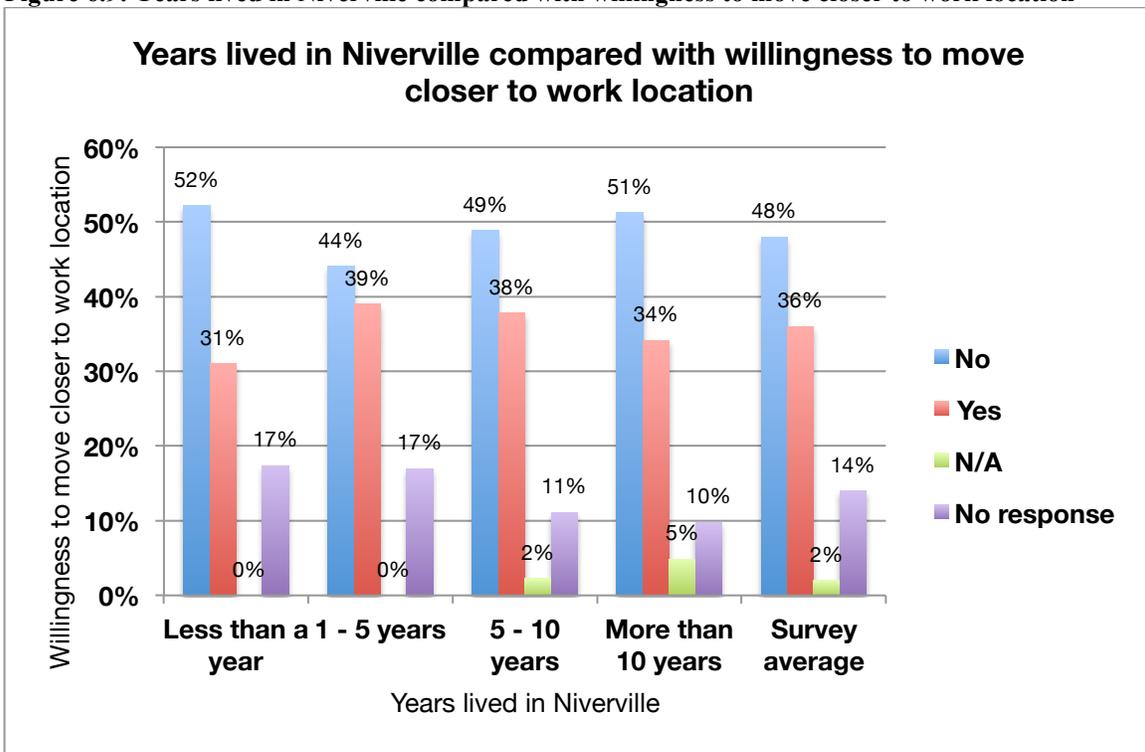


The notable pattern is that the percentages for “Equal expectations” decreased for newer residents (with the exception of less than year), while percentages for “Exceeds expectations” increases for newer residents. An increasing amount of satisfaction of Niverville has grown by each new wave of residents. This could be due to the growing dissatisfaction among residents that previously lived in Winnipeg, who were frustrated with high housing costs and the lack of a good community atmosphere. As this dissatisfaction has grown, Niverville has in turn grown, and newcomers are very happy with their choice to live there. Niverville has also expanded its commerce as new comers are enjoying the small town lifestyle with the added benefits of necessary amenities including a grocery store, bank, gas station and medical services.

Willingness to move closer to work

When comparing with the time lived in Niverville with a respondents willingness to move based on where they work, generates similar percentage rankings to the survey average (See Figure 6.9).

Figure 6.9: Years lived in Niverville compared with willingness to move closer to work location



The greatest difference between “No” (52%) and “Yes” (31%) counts was with the residents living in Niverville for less than a year. This could be due to, as stated previously, the great meeting and exceeding of community expectations among less than year residents, as well as new residents having no desire to move as they have moved somewhat recently.

The second highest separation between “No” (51%) and “Yes” (34%) counts was for residents living in Niverville for more than 10 years. The high preference to not move closer to work for long-time residents could be an indication of stronger attachment to the community, in which they have had more time than newer residents to develop friendships and a social network that would make moving a less desirable option.

Residents in the “middle” time frame of 1 – 5 years and 5 – 10 years, have an increased willingness to move closer to work, although not much higher than the survey average. This may be an indication that they enjoy the community, but have not had as much time as the more than 10 year residents have to develop deeper social and community connections, therefore they may be more flexible to moving. Further research could be done to identify specifically why “middle” time frame residents have an increased willingness to move closer to work.

This information answered the research question, “What are the perceived benefits of living in Niverville?” and revealed a deeper understanding of the relationship between commuting and the exurban community. Determining the preferences of individuals for desiring to live in Niverville, which includes the reasons for living there and the community expectations, indicated the high satisfaction among respondents of their chosen community. This high satisfaction is consistent among old and new residents of the community even with their specific preferences for living in the community being slightly different. It concludes that exurbanites are different from suburbanites, as they moved to an exurban town for reasons other than affordable housing, such as raising a family, good community atmosphere and having nearby amenities. It also somewhat

disproved the hypothesis that households moved to Niverville for a modified version of “rural/country” living with affordable housing, as the social characteristics of the community were the key reasons for households moving to Niverville.

6.3 Relationship between commuting and community choice within a household

According to the findings, 67% of respondents made equal decisions among household members regarding neighbourhood preference and commute. Household size and the number of household workers did not influence the balancing of household decisions as originally thought, however the work location did. The effect of work location on household-decision making is explored in this section along with information from the findings that answered the research question “How do residents aim at balancing decisions about commuting and community choice?”

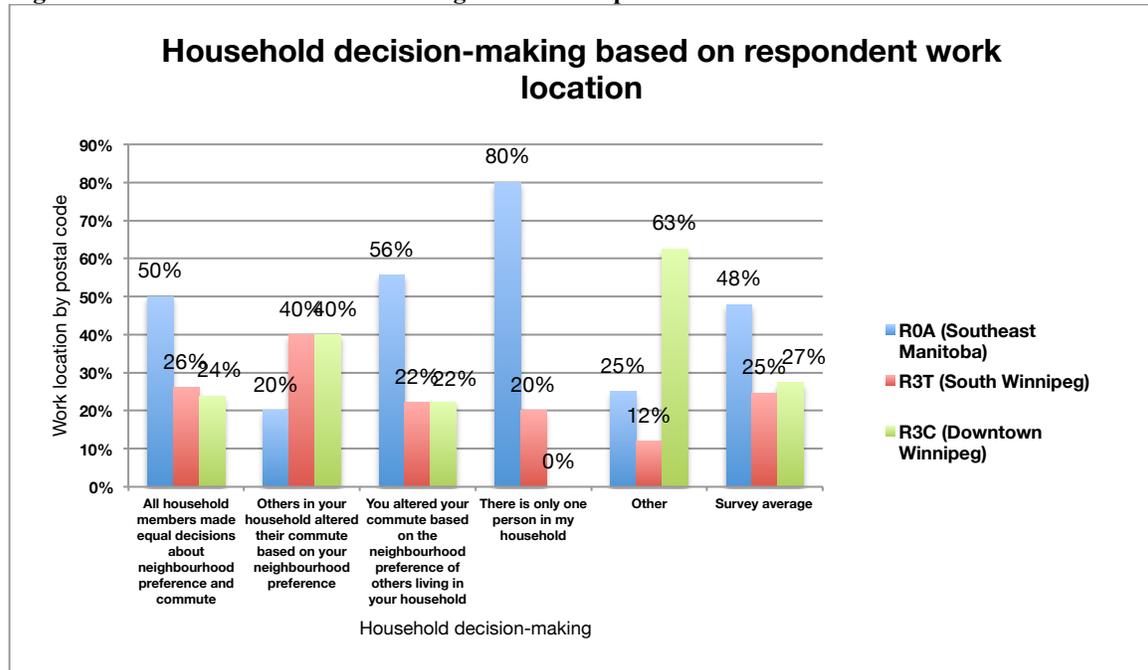
6.3.1 Household decision-making based on work location

As conducted in prior sections of this chapter, the work locations used are the highest recorded work locations by postal code that represent 3 broad regions: (1) R0A (Southeast Manitoba), (2) R3T (South Winnipeg) and (3) R3C (Downtown Winnipeg). These locations were compared with respondents who chose 1 of the 5 possible answers for how households made decisions on neighbourhood choice and commuting: (1) “All household members made equal decisions about neighbourhood preference and commute”, (2) “*Others* in your household altered *their* commute based on *your* neighbourhood preference”, (3) *You* altered *your* commute based on the neighbourhood

preferences of *others* living in your household”, (4) “There is only one person in my household” and (5) “Other” with an option to describe an alternative answer.

When comparing household balancing answers to work locations, a few interesting anomalies occurred (See Figure 6.10).

Figure 6.10: Household decision-making based on respondent work location



The majority of respondents who chose “Others in your household altered their commute based on your neighbourhood preference” work in the R3T (South Winnipeg) (40%) and R3C (Downtown Winnipeg) (40%). As others in the respondent’s household had to alter their commute for the respondent’s neighbourhood preferences, it appears as though the respondent had to also alter their commute in order to live in Niverville. On the other hand, the majority of respondents who chose “You altered your commute based on the neighbourhood preferences of others living in your household” work in the R0A (Southeast Manitoba) area (56%). This raises more questions, as the respondent lives in the same postal code area where they work, therefore it seems questionable as to why the

respondent had to alter their commute to move to Niverville. There is a possibility that the respondent had previously lived closer to their work location, which could have been another City or Town in the R0A area, however this information lacks that awareness.

For the “Other” category of household decision-making, a variety of answers were recorded. One R0A respondent who stated “Other” indicated that there, “commute changed after moving to Niverville when job changed”, which only describes how their commute changed, and not how it affected others living in their household. One R3T respondent stated that they, “moved from St. Adolphe because of divorce and no rentals in St. Adolphe.” This respondent indicated the move to Niverville was for housing availability, and that another household member could have influenced the affect on their commute. One R3C respondent stated that, “I altered my commute due to my husband’s job requirements” and another stated, “husband wanted to stay here.” The first comment revealed that the respondent works in Downtown Winnipeg and moved to Niverville for another member of their household’s job requirements, not for neighbourhood requirements as the response states, “You altered your commute based on the *neighbourhood preferences of others...*” The second comment revealed that the respondent lives in Niverville based on another member in their household’s preference for living in Niverville, which falls under the listed response of, “You altered your commute based on the neighbourhood preferences of others living in your household.”

“How do residents aim at balancing decisions about commuting and community choice?” was the most complex question of this research. As discovered, families are moving to Niverville as it is equidistant between multiple work locations for a household

and that the majority of respondents made decisions to move there based on the same reasons (See *Findings Section 5.11.2*). This information was unexpected, however the third hypothesis of the research proved to be true; that community location choices are only partially based on commuting behaviours, as exurbanites place more value on living in a community, such as Niverville, than shortening their commute.

7.0 CONCLUSION

The research suggests that Niverville residents are commuting to several different locations in the southeast region and are not always relying on a large urban area, in this case Winnipeg, for employment opportunities. This indicates that residential, along with employment locations, are shifting to areas outside of Winnipeg, and thereby creating commute times that are not as long as perceived. Niverville residents are also highly satisfied with their chosen neighbourhood location, as it provides a variety of amenities, housing options and a thriving social atmosphere. Household decisions regarding choices of community location and commuting are complex, yet fair, as the majority of households indicated that *all* household members influenced decisions equally. Much like any research endeavour, the answering of these research questions has led to the following conclusions and has posited several new opportunities for future research.

7.1 Implications for the exurban community

As Nelson et al. (1994) theorized that the growing preference of the exurban community is due to the “failure of suburban neighbourhoods for its lack of community sensibility” (p. 54). The case study of Niverville residents and their preferences for the exurban community have proven this to be true. It is important to note that not all of the perceived benefits of living in Niverville are due to the failure of Winnipeg suburban neighbourhoods, however it concludes that exurban small towns contain more than residential land uses and that exurbanites differ from suburbanites.

7.1.1 Exurban small town residential as a “complete community”

The exurban small town residential is defined as an area adjacent to a large urban

center that contains several local amenities, unlike the exurban rural residential, which is merely a clustering of large homes that contains no commercial or institutional uses.

While Niverville benefits from the close proximity to Winnipeg for greater access to amenities, it is also important for Niverville, and other exurban small towns, to continue fostering their local commercial and institutional development. This will aim to increase local employment opportunities and to create a “complete community”, where residents can both work and live. In accordance with Dueker’s (1994) categories of exurbia, this case study proved that exurban small town residential areas are different from exurban rural residential areas, not only for the diversity in land uses, but the preferences that exurban small town people have for living in their community differing from exurban rural residential (p. 51).

7.1.2 Social benefits of exurban small town residential

While it has been determined that exurban small town residential areas are different than exurban rural residential areas in terms of land uses, they are also different in terms of preferences for choosing to live there. While Johnson’s (2008) study concluded that exurban rural residential households primarily moved there to obtain more privacy, the respondents of the exurban small town residential area of Niverville recorded privacy as one of the least motivating factors to locating there (p. 709). Upon the analysis comparing old and new residents, it did reveal that older residents moved to Niverville for privacy and wanting to live closer to nature, which resembles preferences of exurban rural residential living (Johnson, 2008, p. 709). As there are differences between the preferences of exurban small town living amongst old and new residents, all residents had high preferences for the social atmosphere of living in Niverville, with the highest

recorded reason being that it was a “Good place to raise a family” and the third highest as “Good community atmosphere.” This increasing satisfaction for living in a community that contains more than just affordable housing, indicates that exurbanites, are different from traditional suburbanites, for they are fleeing suburban neighbourhoods due to their lack of social interaction and sense of community.

7.2 Implications for the exurban commute

As it is a goal in several areas of professional practice to eliminate greenhouse gas emissions due to excessive driving, it is somewhat difficult to achieve this for exurban commuters, as they heavily rely on infrastructure suited only for automobile use. While the majority of exurban commuters use the automobile to travel to work, the research has shown that work locations are decentralizing from larger urban centers, which has created shorter commute times for exurban residents. Although most respondents have had their commutes increase to some degree upon moving to Niverville, those individuals are enjoying commutes because they enjoy highway driving, having time alone or the social and economic benefits of carpooling.

7.2.1 Influence of work location

Work location is a factor that influences countless components of commuting. It influences how households make decisions regarding where to live and how to commute, it affects the commute mode and level of commute enjoyment, the preferences for living in Niverville, as well as the willingness to move closer to work. The influence of work location was present as the findings showed that a commuter with either an extremely

short or long commuting distance enjoyed their commutes more than an individual with a “medium” length commuting distance (Distance in between short and long). Preferences for living in Niverville when compared to work location indicated that those with the longest commuting distances had the highest percentage of “Growing up in Niverville” (4%) for reasons as to why they moved there and the highest percentage for the community “Exceeding expectations” (50%). This concludes that those with longer commutes justified their commute as it meant living in Niverville. Lastly, several respondents indicated that they chose to live in Niverville for its location was central to their household’s various work locations and that deciding where to live and how to commute was equal amongst all household members.

7.2.2 Social implications of commuting

As there are several factors that influence not only commuting, but exurban commuting, it is important to note that the social implications of commuting are crucial in understanding why people commute the way that they do. These social implications, as outlined in earlier studies, should contain socio-demographics such as household size, number of household workers, age etc., which is often missed in transportation research (Boarnet & Sarmiento, 1997, p.1156, 1166). Even more important, as this research has presented, are the attitudes and perspectives towards commuting that influence travel behaviour. While planners and other professionals aim to decrease the use of the car, it becomes increasingly more complicated as commuters enjoy and are satisfied with their commute time, not because it is the only mode choice or that it is more convenient than other transportation modes.

7.3 Implications for planning practice

The research presented creates a foundation for which planning professionals or organizations may reference when creating future plans for Niverville, or other exurban, rural and regional areas. The information collected and disseminated encompasses topics in exurban developments, commuting and the relationship between the two, which aimed to fill in the existing research gaps. There are no explicit recommendations offered from this practicum, as the information presented is intended to enable practitioners to create their own inferences and recommendations for future planning and research endeavours.

7.3.1 Education on exurban communities

Exurban communities, as well as their relationship to commuting, have proven to be extremely complex. As planners often default their expertise to one particular topic in planning, it is important to broaden the scope by addressing problems through an interdisciplinary lens, especially when planning for exurban communities. The exurban community also poses a somewhat moral dilemma for planners who prize the compact urban environment, and may view exurban communities as a newfound exaggerated form of traditional suburban sprawl. It is important to educate planners on what exurbia is and that those who live in these communities are different than those living in suburban communities. Whether old or new residents, exurbanites of Niverville resemble those who settled in a small town long ago and those who are moving there for a more enriching social experience. Both groups of residents enjoy the sense of community, local amenities and employment opportunities that Niverville has to offer. No matter the context, planners need to plan for what people want, not what they think they want, and to do so by listening to the public's needs to plan for them in a socially, economically and

environmentally responsible manner.

7.3.2 Social implications of transportation planning

As the social implications for the exurban commute have been previously addressed, it cannot be reiterated enough that the attitudes, opinions and perceptions of commuting amongst individuals are essential for transportation planning and research. Knowing the factors that influence people's commutes will aid in the planning of transportation plans and policies, as well as the planning for new residential communities. It is often difficult to plan for exurban communities that are dependent on car use and that families chose to live in these areas, as it appears to defile the planner's attempts to minimize sprawl. As exurban households have shorter commute times than expected, their preference for using the automobile is still prevalent, as their reasons behind using the car are not always correlated to commute time. Transportation planners and researchers must also be aware of their "ego-centricity" in transportation studies, which causes them to "under-estimate" car use, especially among younger generations (Ralph & Delbosc, 2017, p. 292). Planners must put aside their own preferences of transportation when evaluating the public's travel behaviours in order to properly evaluate the social implications of transportation for the context in which they are planning for.

7.3.3 Future planning for Niverville

As recommendations are not included in this practicum, this section will, however, offer a few ways in which Niverville, or those planning for Niverville, can use the findings and conclusions from this research. It appears as though Niverville is looking to support the current and future residential growth of the community by developing

more commercial opportunities to provide more jobs. This effort will create a more complete community, will decrease commuting times and therefore increase the number of commute modes available. The findings also revealed that several respondents enjoyed the community for its “small town feel” and friendly community atmosphere. The challenge for Niverville moving forward is to maintain this strong social cohesion while allowing for new residential and commercial development to flourish. As these implications for the future planning of Niverville are broad, it is up to planners and other stakeholders to create strategic plans that aim to accompany new population growth while maintaining Niverville’s “small town feel.”

7.4 Opportunities for further research

There are various opportunities for additional research related to studying the relationship between commuting and the exurban community. As the majority of the respondents stated they moved to Niverville because they disliked living in Winnipeg, it would be informative to know which neighbourhood they had previously moved from to determine what that neighbourhood did not possess that Niverville may possess. In addition, a more precise work location would decrease any unknowns in the data and provide a more in-depth account of a respondent’s commute.

As it was only partially explored in this study, research regarding the attitudes and opinions on commuting and community choice between old, or long-time, residents and new residents, would be important in assessing how and why Niverville has grown so rapidly in the past decade. This research uncovered a few anomalies between older and newer residents regarding their community preferences and expectations, which aimed to build upon the current definition of exurbia and exurbanites. This type of study could be

coupled with the previously stated study of identifying where new residents had previously lived to uncover more on why they disliked a particular community and enjoy living in Niverville.

Additional research following this practicum, that is more theoretical in nature, could include a multiple case study of several exurban towns outside of Winnipeg for a contextual exurban comparison between the different areas outside of the City. More research could also be conducted on the relationship between commuting and neighbourhood structure using different neighbourhood types such as suburban or urban communities. A study of different neighbourhood structures in this manner would aid in developing the definition of exurbia, as a comparison between neighbourhood types would further prove what constitutes an exurban neighbourhood and what does not.

Continued opportunities for future research, that have a greater real-world application, could focus on rural or small town transportation planning, policies and initiatives or educational programming. Such programming could include commuting workshops to educate people on commuting options or the creation of a carpooling program to create carpools based on where people work. Precedent studies of what other rural or exurban towns have implemented would aid in this type of study.

7.5 Closing

The research has identified that exurban small towns are desired for their sense of community and their abundance of amenities that support exurban life. Commuting amongst exurban residents has proven to be various and non-monocentric, or polycentric, for employment is located in several areas throughout Southeast Manitoba. This research

has begun to answer the key question, *if people are choosing to live further from Winnipeg, is their commute necessarily longer?* Their commutes, were in fact, not always as long as often perceived. The relationship between commuting and the exurban neighbourhood indicates that the majority of individuals hold more value in their community location than shortening their commute. Individuals however, still take into consideration where they commute when making decisions on where to live, as well as to how it will affect others living in their household. This balancing act that occurs within households is more exaggerated in an exurban household, as the modes of travel are limited and the adaption to a new commute, although not necessarily a long commute, is often a great adjustment for a household. Amongst certain scarifies however, residents are optimistic, as Niverville satisfies their needs for social interaction and serves as a place in which they can call home.

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APPENDIX A: Intercept survey questions

i.) Have you taken this survey before, either on-line or in person?

a.) Yes

b.) No

1.) What is the postal code of your residence? _____

2.) How many people live in your household?

a.) 1

b.) 2

c.) 3

d.) 4 or more

3.) Of the people living in your household, how many are 18 years and older and in the workforce?

a.) 1

b.) 2

c.) 3

d.) 4 or more

4.) How long have you lived in Niverville?

a.) Less than a year

b.) 1 - 5 years

c.) 5 – 10 years

d.) More than 10 years

5.) What were your reasons for living in Niverville? *(Circle all that apply)*

a.) Grew up in Niverville

b.) To live closer to family or friends

c.) For your work

d.) For spousal/partner's or family's work

e.) Good community and place to raise a family

f.) Housing was affordable

g.) Wanted to live closer to nature in a 'rural' or 'country' setting

h.) More housing or property space

i.) More privacy

j.) Other: _____

6.) A.) Has the community met the expectations you had when you first moved there?
Rank on a scale between 1 and 5.

1	2	3	4	5
Has not met expectations		Neutral		Has Exceeded Expectations

B.) Could you provide some specific examples as to why the community has or has not met your expectations?

7.) A.) What area do you work in? (*Circle all locations if you hold multiple jobs*)

- a.) The Town of Niverville
- b.) Outside of Niverville (rural)
- c.) Another town or city in Manitoba
- d.) Winnipeg
- e.) At home (Ex. telecommute, stay at home parent) **Skip only to questions 12-14*
- f.) Other: _____

8.) Could you provide either the postal code(s), street name(s), or intersection of streets of where you work?

a.) If yes, write on the line below:

b.) I prefer not to answer

9.) How do you get to work everyday?

- a.) Car
- b.) Carpool
- c.) Walk
- d.) Bike
- e.) Bus (includes Park and Ride)

f.) A combination of two or more modes of travel (Ex. Sometimes drive, sometimes walk)

10.) On average, how long does it take for you to get to work?

- a.) Less than 15 minutes
- b.) 15 – 30 minutes
- c.) 30 - 45 minutes
- d.) 45 – 60 minutes (1 Hour)
- e.) More than 1 hour

11.) A.) Do you enjoy your daily commute to work?

- a.) Always
- b.) Often
- c.) Sometimes
- d.) Rarely
- e.) Never

B.) Can you provide some reasons as to why you like or dislike your commute, or if you feel indifferent about it?

12.) How has living in Niverville affected your commute? For example increased/decreased the commute, changes in travel mode, or other lifestyle changes.

13.) A.) When referring to neighbourhood preference, deciding to live in a neighbourhood such as Niverville, which of the following is true:

- a.) You altered your commute based on the neighbourhood preference of others living in your household
- b.) Others in your household altered their commute based on your neighbourhood preference

- c.) All household members made equal decisions about neighbourhood preference and commute
- d.) There is only one person in my household, therefore no decisions regarding neighbourhood preference and commute were based on others
- e.) Other: _____

B.) Could you briefly describe how your household made these decisions?

14.) A.) Would you ever consider moving to live closer to where you work?

- a.) Yes
- b.) No
- c.) Not Applicable

B.) If you answered yes or no, why or why not?

15.) Do you have any additional comments regarding commuting and/or living in Niverville?

If you would like to be entered in the draw to win a \$200 Visa Gift Card, provide your e-mail address or phone number on the line below:

APPENDIX B: On-line survey questions

i.) Have you taken this survey before, either on-line or in person?

a.) Yes

b.) No

1.) What is the postal code of your residence? _____

2.) How many people live in your household?

a.) 1

b.) 2

c.) 3

d.) 4 or more

3.) Of the people living in your household, how many are 18 years and older and in the workforce?

a.) 1

b.) 2

c.) 3

d.) 4 or more

4.) How long have you lived in Niverville?

a.) Less than a year

b.) 1 - 5 years

c.) 5 – 10 years

d.) More than 10 years

5.) What were your reasons for living in Niverville? *(Click all that apply)*

a.) Grew up in Niverville

b.) To live closer to family or friends

c.) For your work

d.) For spousal/partner's or family's work

e.) Good community and place to raise a family

f.) Housing was affordable

g.) Wanted to live closer to nature in a 'rural' or 'country' setting

h.) More housing or property space

i.) More privacy

j.) Other: _____

6.) A.) Has the community met the expectations you had when you first moved there?
Rank on a scale between 1 and 5.

1	2	3	4	5
Has not met expectations		Neutral		Has Exceeded Expectations

B.) Could you provide some specific examples as to why the community has or has not met your expectations?

7.) A.) What area do you work in? (*Click all locations if you hold multiple jobs*)

- a.) The Town of Niverville
- b.) Outside of Niverville (rural)
- c.) Another town or city in Manitoba
- d.) Winnipeg
- e.) At home (Ex. telecommute, stay at home parent) **Skip only to questions 12-14*
- f.) Other: _____

8.) Could you provide either the postal code(s), street name(s), or intersection of streets of where you work?

a.) If yes, write on the line below:

b.) I prefer not to answer

9.) How do you get to work everyday?

- a.) Car
- b.) Carpool
- c.) Walk
- d.) Bike
- e.) Bus (includes Park and Ride)

f.) A combination of two or more modes of travel (Ex. Sometimes drive, sometimes walk)

10.) On average, how long does it take for you to get to work?

- a.) Less than 15 minutes
- b.) 15 – 30 minutes
- c.) 30 - 45 minutes
- d.) 45 – 60 minutes (1 Hour)
- e.) More than 1 hour

11.) A.) Do you enjoy your daily commute to work?

- a.) Always
- b.) Often
- c.) Sometimes
- d.) Rarely
- e.) Never

B.) Can you provide some reasons as to why you like or dislike your commute, or if you feel indifferent about it?

12.) How has living in Niverville affected your commute? For example increased or decreased the commute, changes in travel mode, or other lifestyle changes.

13.) A.) When referring to neighbourhood preference, deciding to live in a neighbourhood such as Niverville, which of the following is true:

- a.) You altered your commute based on the neighbourhood preference of others living in your household
- b.) Others in your household altered their commute based on your neighbourhood preference

- c.) All household members made equal decisions about neighbourhood preference and commute
- d.) There is only one person in my household, therefore no decisions regarding neighbourhood preference and commute were based on others
- e.) Other: _____

B.) Could you briefly describe how your household made these decisions?

14.) A.) Would you ever consider moving to live closer to where you work?

- a.) Yes
- b.) No
- c.) Not Applicable

B.) If you answered yes or no, why or why not?

15.) Do you have any additional comments regarding commuting and/or living in Niverville?

Click 'submit' once you have answered all questions to your satisfaction and you will be redirected to another page where you may submit your e-mail address or phone number to be entered into the \$200 Visa Gift Card draw. Your e-mail address/phone number will be stored separately from your survey responses.

END OF SURVEY

If you would like to be entered in the draw to win a \$200 Visa Gift Card, provide your e-mail address or phone number on the line below:

APPENDIX C: Winnipeg and Manitoba postal code work locations

Winnipeg postal code work locations

Postal Code	Count
R2R	1
R2V	1
R2G	2
R2X	4
R3W	1
R3H	2
R3E	1
R2C	4
R3B	3
R3A	3
R3C	19
R3G	1
R3J	2
R3K	1
R2H	1
R2J	5
R3L	1
R3M	1
R3N	1
R3S	1
R3P	4
R2M	2
R3X	1
R3Y	7
R3T	17
R2N	1
R4H	3
Total	90

Manitoba postal code workplace locations

R0E	3
R0G	3
R5A	1
R5G	10
R0A	36
R0K	1
R8N	1
Total	54

Outside of Manitoba postal code workplace locations

P8N	1
Total	1