



Achieving equity in public transit planning: A critical assessment of Markham, Ontario' s Highway 7 rapid transit corridor

A Major Paper submitted to the Faculty of Environmental Studies in partial fulfillment of the requirements for the degree of Master in Environmental Studies (Planning)

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Abstract

Contrary to other research that critically assesses transit projects using an equity imperative, the primary intent of this research is not only an empirical assessment of physical barriers which contribute to diminished transit access, but also a critical assessment of the policies used to guide the Highway 7 vivaNext Rapidway and land use development across York Region and Markham. A review of broad policy frameworks, I argue, is necessary to begin addressing issues that transit equity experts continuously raise. My research reviews transit equity and social exclusion literature to provide readers with an understanding of how equity can be defined and why appropriate terminology is important when planning transit infrastructure projects. In forming a critical assessment of the Highway 7 rapid transit corridor, I use a political economy framework to examine the growth imperative used in justifying greater density on Highway 7, and the continually changing nature of governing regimes involving both public and private sector actors. With social vulnerability growing in both Markham and York Region, it becomes increasingly relevant to assess policy in order to determine how planning processes could produce more equitable outcomes. Equity should be a key component in planning public transit however, equitable outcomes will become more difficult to achieve if transit continues to be less of a “public” infrastructure, and more of a “private” responsibility.

Foreword

This Major Paper has been submitted to the Faculty of Environmental Studies (FES) in order to satisfy all of the Master in Environmental Studies (Planning) program requirements, including the Plan of Study. The Plan of Study has evolved throughout the duration of my time in the program, and reflects not only the knowledge I have gained through coursework and field experiences, but my sincere interest in transit equity, policy, transportation, and land use planning. The literature that I have chosen to incorporate into this Major Paper stems from the knowledge I have gained while in the MES program. From Component 1 of my Plan of Study, Transportation Decision-making and Governance, I used a political economy framework to provide a more critical perspective of planning and policy which has a mandate of supporting continuous growth and economic development. The Growth Machine literature expands on this consensus for growth amongst political elites, and Urban Regime theory elaborates on the fragmented nature of decision-making and the relationship between private and public actors. In order to effectively discuss transit equity, I gathered a variety of literature on the topic which expands on Component 2, Public Transit Equity and Access. I used the work of Norman Krumholz as a foundation for understanding equity within planning, reflecting on his experiences in Cleveland. Finally, I did not continue to focus on the global city literature from Component 3, Local and Global City Infrastructure. However, there is still a discussion on how transit is planned and marketed as a premium network and service.

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Chapter 1 – Introduction

1.1 Research Background

This research paper identifies the Markham Highway 7 vivaNext Rapidway as a case study and hence force it will be referred to as the Rapidway. The paper examines policies used in developing the Rapidway, and critically reviews whether an equity lens was considered and how it could be considered given the present day socioeconomic conditions in Markham. The research uses demographic and statistical data to identify groups that are transport disadvantaged while also considering the type of rider the Rapidway project was intended to serve and target. While using the Rapidway as the main focal point, the intention of the research is to contribute to broader conversations related to social justice in transit planning. The all-encompassing goal of the research is to investigate current transportation and land use planning practices and to assess if a shift is required in the way transit projects are planned in the GTA/ York Region in order to accommodate transit users with few mobility options. Using existing findings and literature, I will define public transit equity, and determine who the disadvantaged groups are.

The research topic stems from my previous research on the Union-Pearson Express (UPX) where I began to understand why equity is a truly important lens to consider in planning large-scale transportation infrastructure. Working in collaboration with community members from the Junction Triangle neighbourhood, I was able to draw a connection between the rail project which generates harmful diesel emissions, and the externalities associated with pollution that were harmful to the community. The question of equity was and still is clear

today. Are those who are enduring harm from pollution also benefitting from the infrastructure generating noxious fumes? With the cost to ride the UPX being unusually high, and having the service marketed as premium, what do local residents stand to gain from having this infrastructure in their community, and who are the intended choice riders? Questions such as these help begin our discussion on equity.

1.2 Methodology

The research conducted for this Major Paper was subject to an approved risk assessment and an application to conduct research ethics protocol for research involving human participants, both of which were approved by the Faculty of Environmental Studies (FES). The informed consent forms and interview questions used can be found in Appendices A and B. I began my research with a literature review to define the term equity and social exclusion within this Major Paper. I acknowledge that defining equity as it relates to public transit access has been difficult especially since the term is broad and has various interpretations. In order to understand the specifics of the Rapidway case study, I conducted an online search of material that had any relationship to the project. The search included local newspaper sources like the Toronto Star, the Globe and Mail, and YorkRegion.ca. As well, I consulted council minutes from the City of Markham and the Regional Municipality of York. I also read relevant policy and planning reports (all of which are listed in the Works Cited section). Some of the older planning documents have been archived and are not available online. Accessing those required me to review archival data from York University's Urban Studies program. Additionally, I conducted

on-site observational analysis which included riding the Rapidway on several occasions. I have included several of my own photos of the project in the Major Paper.

In order to gain a range of perspectives and deeper understanding of the Rapidway project and property development in Markham, I attended several conferences with presentations related to the case study. I attended the Association for Commuter Traffic (ACT) Canada Conference on December 1st in Markham, 2014, a Professional Engineers of Ontario (PEO) event titled “Engineering the Future of GTA Transportation” on March 25, 2015 in Markham, an Urban Land Institute (ULI) Event titled “Is Gen Y Buying What the 905 is Selling?” on September 29, 2015 in Markham, and the Ontario Professional Planners Institute (OPPI) Conference held in Toronto from October 6-8, 2015. Finally, I presented my initial research findings at the Canadian Association of Planning Students (CAPS) Conference in Winnipeg on February 7, 2015.

I have conducted primary research in the form of semi-structured interviews and have chosen several respondents with the intention of discovering a range of experiences. Two of the five interviews took place at Toronto coffee shops, one through Skype, and two took place in the respondent’s personal office. The interviews lasted between 30 and 90 minutes, and were recorded using the Apple iPhone application “QuickVoicePro.” The first interview was with an engineer with York Region Transit who was involved during all of the major design, planning and implementation phases of the project. I chose to begin with this individual to provide me with a general overview of all project details and his initial sense of challenges associated with the project. The second interview was with a Professor from Montreal who

specializes in transportation and provided me with useful information on Bus Rapid Transit and his interpretation of transit equity. The third interview was with a planning consultant who was able to speak to the case study based on his own experience with the project and with the transit agencies involved, and who could also comment on some of the socio-economic concerns in Markham and York Region. The fourth respondent was the Manager of Public Affairs for United Way York Region and she primarily discussed her experience working with marginalized groups in York Region, and assisted in the identification of specific disadvantaged groups in Markham and York Region. The fifth respondent I encountered through her written articles with Spacing Magazine on public transit and equity. She provided me with an enhanced understanding of transit equity, and steps to address socio-economic concerns based on her professional and personal experience as a planning consultant, place-maker, and someone with experience in marginalized communities. Finally, I spoke with York University Geography Professor Valerie Preston whom I did not quote in the research, rather she informed me through a discussion of relevant sources that I have used in my research.

The Major Paper reviews planning and policy related to the Rapidway project on Highway 7. The purpose of policy analysis is to assist decision-makers in formulating or improving existing policies (Charlton & Charlton, 2006, 65). My research identifies solutions to current land use and transportation planning problems using transit equity literature as a guide in creating greater access and opportunity for groups whose mobility options are disadvantaged the greatest. Although policy analysis papers are not intended to be theoretical or overly general in nature, according to Charlton & Charlton (2006), my research includes political economy theory as a framework while identifying and evaluating specific policy options for

specific problems (p.65). Given the limited length of the Major Paper, I provide a very broad overview of some of the potential disadvantaged groups which exist in Markham. A closer and more thorough examination of demographics using enhanced data analysis, statistical, and software capabilities could potentially reveal another segment of the population who is also transport disadvantaged.

Chapter 2 – Case study background

2.1 Understanding “public transit”

How do we understand “public transit”? Before beginning a critical discussion on the topic, it is important to understand certain fundamental details about the case study in question. Firstly, what is public transit? The definition can vary based on geographical area, however, public transit is commonly known as a transportation service provided by or on behalf of a public sector agency. The service is typically paid for partially by the user through fare collection, taxation and/or subsidization. The cost to the user can be substantially less than owning a private automobile, and public transit can be seen as an attractive form of infrastructure for governments because of the capacity it offers in comparison to the private automobile. From a transit equity perspective, public transit can be viewed as a public good rather than a service paid for by the user. This public good can effectively improve mobility for users who have no other means to travel and grants individuals of all classes the ability to travel and experience the city. There are many forms of transit technology used in public transit, however the case study is an example of Bus Rapid Transit (BRT) technology.

2.2 Bus Rapid Transit (BRT)

Bus rapid transit or simply BRT, is commonly identified as a high-order bus transit service which operates either entirely in its own dedicated right-of-way lane located generally in the median of a roadway, in a lane dedicated to transit or high-occupancy vehicles, in mixed traffic, or a combination of any of the three (CUTA, 2007). The Rapidway on Highway 7 in Markham is an example of a BRT operating in both dedicated lanes and in mixed traffic. According to the

Canadian Urban Transit Association (CUTA), “Bus rapid transit is a rubber-tired rapid transit service that combines stations, vehicles, running ways and a flexible operating plan into a high-quality, customer-focused service that is fast, reliable, comfortable and cost-efficient” (CUTA,2007). BRT has been implemented worldwide and has become popular in recent decades as a means to delivering efficient



Figure 2.1 - Winnipeg RT (Photo by author)

transit service at a fraction of the cost compared to modern rail transit systems like Light Rail Transit (LRT) while providing similar capacity (Mees, 2010, 127). For example, in cities like Bogota, Colombia, the BRT system is regarded as a tool for enhancing social capital, contributing to social justice, and a means of improving service for residents with the least access. Currently, there are 195 cities who have implemented BRT networks around the world (ITDP, 2015). There are examples of fully-operational BRT systems in Canada like Ottawa’s OC Transpo Transitway and the Winnipeg RT (Figure 2.1).

When discussing the advantages of BRT with one of the lead engineers working on the Rapidway, he advised me that using a BRT over LRT means that maintenance facilities do not need to be located directly on the transit corridor, and if one bus breaks down while in service, it does not impact other buses on route (2015, personal interview). Professor Pierre Barrieau,

who is a part-time faculty at UCAM and the University of Montreal, and a former contract Transportation Geography professor at York University, was asked his perspective on BRT and if he thought it to be a cost-effective way to accommodate a greater number of users. Professor Barrieau responded by saying:

“BRT has a function in suburbs that are automobile-based with low density because the local bus lines can use the BRT right-of-way to save time. BRT can be effective if you are not planning to have major growth in a slow growth area because it will be an effective service for a long time. Once capacity is reached it will have to be converted to LRT. Decision-makers will argue that the BRT to LRT conversion is relatively cheap however, examples have shown that the existing BRT infrastructure cannot be reused so easily. The Downsview Station to York University BRT definitely paid off even though it was planned as an interim solution before the arrival of the subway” (Barrieau, 2015 personal interview).

2.3 Markham and York Region, Ontario

The Regional Municipality of York, or simply York Region is two-tiered consisting of nine lower-tier municipalities and is located north of the City of Toronto, west of Durham Region, and east of Peel Region. The region as a whole is approximately three times the geographical area of the City of Toronto which makes it difficult to provide certain infrastructures. Services such as public transit, water, emergency medical services and policing are managed by York Region, while municipalities look after curb-side garbage collection, local parks and libraries (York Region, 2015a). York Region is a typical commuter community with the majority of people in the region travelling to work by car either as drivers or passengers. In 2006 approximately 85% of workers drove to work, 11% took transit, and less than 4% walked or biked (Lo, Preston, Anisef, Basu, & Wang, 2015, 80).

Markham, a municipality to the north of Toronto, is a lower-tier municipality within the Regional Municipality of York consisting of 301,709 residents in 2011 (Statistics Canada, 2015).

Markham began as a small village settled primarily by German, British, and Swiss settlers in the early 1800s. As a result of improved communication links between Markham and Toronto throughout the 1900s, the implementation of the railway, and water infrastructure, Markham quickly transformed into a typical North American postwar suburb (City of Markham, 2014), (Gee, 2013), (Keil, & Young, 2009, 155). Development in York Region spread rapidly in the 1970s with the introduction of Province of Ontario-supported York-Durham trunk sewer, which allowed treated drinking water to be pumped from Lake Ontario to Markham and then back downhill as sewage water to the Town of Pickering to be treated. “Without those water and sewage connections, Markham would never have (sub)urbanized beyond the modest dreams of the 1950s” (Keil, & Young, 2009, 155). The construction of Highway 404 in the mid-1970s further accelerated urban development in Markham and York Region (City of Markham, 2014). “In the past 30 years, York Region has dramatically changed, from a collection of rural communities to booming suburbs” (Mendleson, 2013). During the 1980s, Markham was boasting low taxes and a booming high-tech industry with IBM being one of the first firms to locate their headquarters there. Markham is known as the “High-Tech Capital of Canada” and markets itself also as a “Silicon Valley of the North” (Keil, & Young, 2009, 155). At that time, it was considered one of the wealthiest municipalities in Canada, and since then Markham has changed and evolved rapidly (Mendleson, 2013).



Figure 2.2 - Greater Toronto Area Map (Wikipedia, 2015)

2.4 Viva and York Region Transit (YRT)

York Region Transit's creation in 2001 represents an amalgamation of the transit systems of the City of Markham, Town of Newmarket, Town of Richmond Hill, and City of Vaughan (Wyatt, 2015). The service now operates within nine municipalities in York Region (York Region Transit, 2011a). The Viva rapid transit service began in 2005 and this initiation was known as "Quick Start." Viva was implemented to operate collaboratively with YRT and to be branded and designed as a faster, more reliable, and customer friendly service (York Region Transit, 2011b), (Ng, May, & Popik, 2014, 4). YRT buses operate more as a local service whereby the driver is responsible for collecting fares. Viva buses operate as the rapid transit and premium alternative

service, located primarily in major corridors (eg. Highway 7, Yonge Street, Davis Drive etc.), and whereby fares are collected prior to boarding via ticket vending machines.

Chapter 3 – Case study: Highway 7 VivaNext Rapidway

3.1 Regional transit

Following the success of Quick Start in 2005, Viva began the next phase of rapid transit implementation through vivaNext in 2008 (Ng, May, & Popik, 2014, 3). The vivaNext Rapidway is a Bus Rapid Transit bus network connecting four major municipalities in York Region: City of Markham, Town of Newmarket, Town of Richmond Hill, and City of Vaughan. The research focuses on the portion which operates along the Highway 7 corridor in Markham, Ontario. In the 1920's Highway 7 was initially designated a provincial highway and "a gateway for city dwellers" to a more rural landscape (Dempsey, 2013). Due to the downloading of Highway 7 onto municipalities throughout the early 2000s, there are now two main segments of the highway. "The western leg from the Highway 4 Junction at Elginfield to Norval is 154 km long, while the eastern leg from Markham to Ottawa is 380 km long. These two sections of Highway 7 are now separated by a 63 km gap, with the road in between maintained and funded by municipal taxpayers of the GTA" (Thekingshighway, 2013). The Highway 7 East vivaNext project began construction in 2010, followed by the expansion of Davis Drive in Newmarket in 2012, and finally Highway 7 West at Vaughan Metropolitan Centre in 2013 (Ng, May, & Popik, 2014, 4). The redesign of Highway 7 to accommodate the Rapidway required the addition of new specialized traffic lights, new water mains, wider sidewalks, dedicated bike lanes, road widening of an average of 12 metres to retain the existing six lanes of traffic and add two dedicated bus lanes in both east and west directions, new station platforms, and a raised median in the centre of the roadway (York Region, 2012b, 7), (Kalinowski, 2013), (Ng, May, & Popik, 2014, 4). The first 2.5 km portion of the Rapidway opened on Sunday August 18, 2013 in Richmond Hill from

Bayview Avenue to Highway 404. There are two main routes operated by Viva on Highway 7 in Markham - Viva pink: rush hour only service, and purple: all-day service (Figure 3.1).

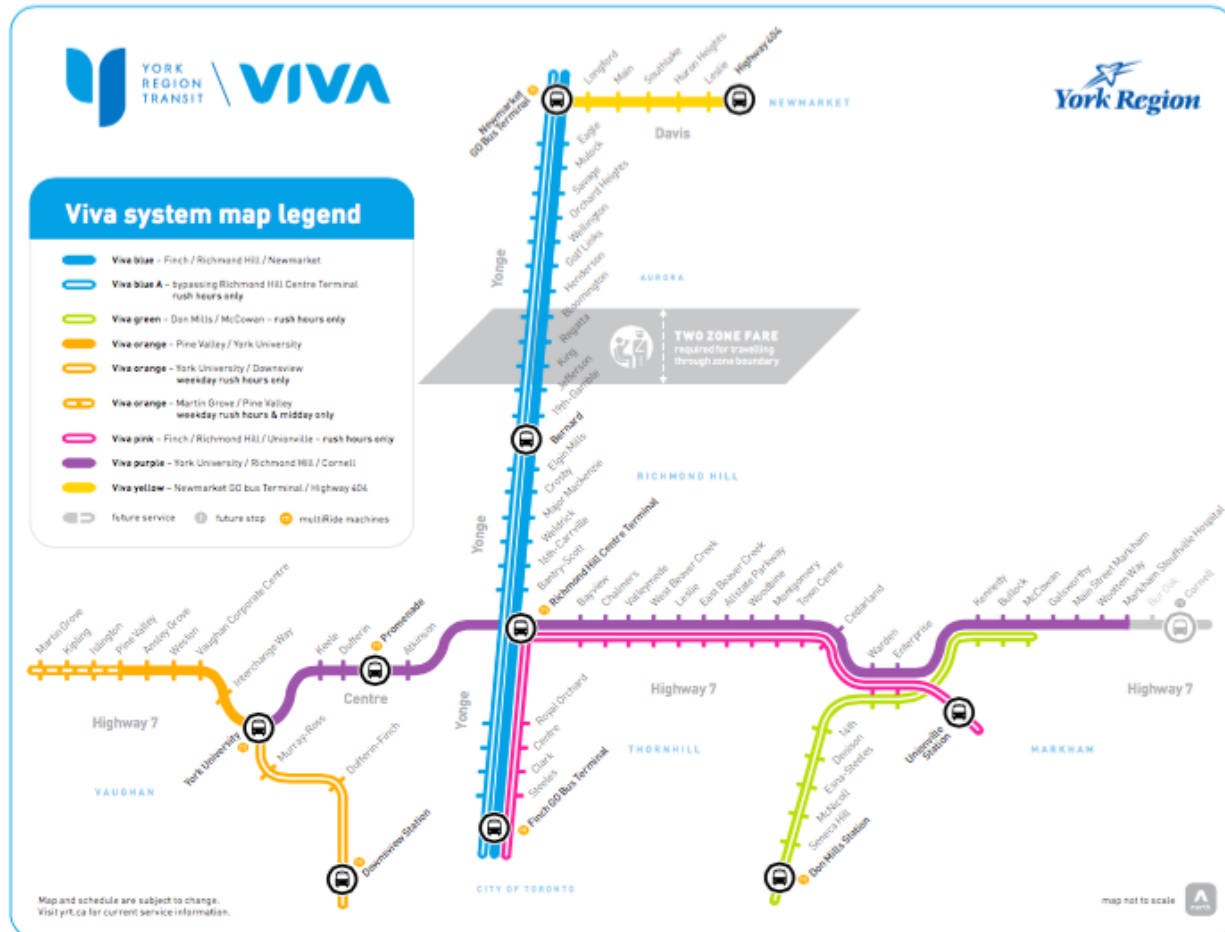


Figure 3.1 - Viva transit route map (York Region Transit, 2011c)

The Rapidway was implemented by Metrolinx under the Big Move plan and received \$1.75 billion in incremental funding over approximately 10 years as a capital allotment from the provincial government (VivaNext, 2013), (Queen, 2015a). The first level of funding was in the amount of \$150 million which was the initial investment that began the Viva network in 2005, then in 2006-2007, the remaining funds were dedicated to Bus Rapid Transit along major arterial roadways in York Region (Queen, 2015a). VivaNext president Mary-Frances Turner

stated that the vivaNext network of BRT is designed to allow a future conversion to Light Rail Transit (LRT) once demand warrants and ridership exceeds bus capacity (Kalinowski, 2013).



Figure 3.2 - Viva bus on route to York University (Photo by author)



Figure 3.3 - Viva Highway 7 Rapidway, Markham, ON (Photo by author)

3.2 York Region Rapid Transit Corporation (YRRTC)

Following the development of its Transportation Master Plan (refer to Chapter 7), York Region formed York Region Rapid Transit Corporation (YRRTC) which is a wholly-owned subsidiary and share capital corporation of York Region (Ng, May, & Popik, 2014, 3). “York Region Rapid Transit Corporation (YRRTC) is responsible for the planning, design and construction of the full vivaNext rapid transit network and related infrastructure to deliver on the transit priorities set out in the York Region Transportation Master Plan” (vivaNext, 2014). The Board of Directors includes the York Region Chairman and Chief Executive Officer (CEO) of the YRRTC alongside four directors

who are Mayors for the Town of Richmond Hill, Town of Newmarket, City of Markham, and City of Vaughan. The YRRTC also has expert staff that develop the planning, delivery, design, engineering, project management, and construction of transit projects (Ng, May, & Popik, 2014, 3). Once the project is built, YRRTC hands the Rapidway over to the Region and YRT/Viva to operate (personal communication, September 28, 2015).

3.3 Private sector actors

Viva initially began operations with three private companies: Miller Transit, Veolia Transportation, and First Canada. Presently, only Miller and TOK Transit operate and maintain the YRT/Viva system which includes the North, Southeast and Southwest Divisions, and Viva Rapid Transit (York Region, 2014a, 4), (CPTDB, 2015). Miller Transit Limited holds a long-term contract with York Region for the operations and maintenance of more than 156 municipally-owned YRT buses (Miller Group, 2015). Following a three-month long strike that shut down YRT/Viva operations, First Canada's contract was terminated by York Region and replaced by the Tokmakjian Group or simply TOK Transit (Toronto Star, 2012). Veolia Transportation (now Transdev) the North American branch of French-owned Veolia Transport, was awarded their contract on April 5, 2005 to operate and maintain Viva and the Southwest Division using the same fares as the existing York Region Transit system (this included the Highway 7 Rapidway) but lost the contract to TOK Transit in 2014 (CPTDB, 2015), (York Region, 2010), (York Region, 2014a, 4). In May of 2014, TOK was granted a 7-year contract approved by the Region granting operations and maintenance over the Viva BRT Division, including the employment of bus operators and the maintenance of the Viva fleet, beginning June 2015 (Tokmajian Group, 2015).

Both Veolia and TOK Transit are globally recognized, multinational companies that have been involved in some controversy. The owner of TOK, Cy Tokmakjian, was sentenced to 15 years in prison in Cuba, but was released after three years for being accused of bribery, falsification of bank documents and trade continuing, illegal economic activity, currency trading, fraud and tax evasion according to Cuban news sources (Cubanet, 2015). According to the Tokmakjian family, “his prosecution was an excuse to seize his Ontario-based Tokmakjian Group's \$100 million US in assets in Cuba” making other investors weary about doing business in Cuba (CBC, 2015). Tokmakjian’s sister, Sonia Tokmakjian stated, “Some of the things they are accusing him of for example, bribery, I mean, this happens in Canada. Companies do give customers gifts, they do take them travelling, they do wining and dining” (as quoted in Huffington Post, 2014). Veolia has also been in the spotlight for its involvement in the construction of the Jerusalem Light Rail (JRL) project, a controversial project said to be a “vital part of Israel’s occupation of Palestinian land” connecting illegally occupied Israeli settlements in the West Bank to the Israeli State (Clark, 2015). In August 2015, Veolia (Transdev) divested and sold their holdings in Israel, meaning a big win for activist campaigns like “Dump Veolia” and “Boycott, Divestment and Sanctions (BDS)” (Clark, 2015), (Dump Veolia, 2015).



Figure 3.4 – “Say no to Veolia” (Dump Veolia, 2015)

3.4 Labour

On October 24, 2011 the Amalgamated Transit Union 1587 went on strike to fight for improved wages from the private operators, stating that too great a portion of the fare goes to the private sector operators and not to workers (Toronto Star, 2012). The union also fought for more political presence from the region at the bargaining table. Union supporters stated that the strike highlights “the region’s refusal to take part in the dispute between transit workers and the private companies for whom they work and points out many of those companies are foreign multi-nationals that care more about profit than public transit” (Banner, 2011a). Following the three-month long strike the union reached a deal, and YRT offered customers free transit for two months as a result of \$9.2 million in savings during the strike (Kauri, 2012).

The Toronto Star recently published an article on the nature of contract flipping which has led to some employees of YRT/ Viva staff feeling like temporary labour (Mojtehdzadeh, 2015). Kathy Breen (Figure 3.5) had been employed with YRT for eight years, and when the contract flipped from Veolia to TOK in June 2015, she was deemed no longer qualified for the position even though she had re-interviewed with TOK, and passed a new driving test with “excellent” results (Mojtehdzadeh, 2015). The Amalgamated Transit Union (ATU) Local 1587 stated that contract flipping leaves workers “with little protection from discrimination in hiring by the new contractor on the basis of union activism or human rights grounds” (Mojtehdzadeh, 2015). What is interesting is that Viva drivers are no longer represented by the ATU as they were with Veolia. Under the new contract with TOK, Viva workers are now represented by the United Food and Commercial Workers Union (UFCW), Local 206 (York Region, 2014a, 14). The difference is that ATU specialized in transit, most notably through their

representation of GO

Transit and YRT workers,

whereas UFCW carries

experience primarily in the

food sector in addition to

“retail, healthcare,

hospitality, security,

financial services, non-food

manufacturing, and many

other industries” (UFCW

Canada, 2015). After

speaking with a current Viva

driver, I was advised that there was relatively good job security with the ATU however, the

contract change has meant that certain staff were specifically targeted by TOK to be laid off

based on their previous performance under Veolia (eg. Excessive time off, driving infractions

etc.) (personal communication, November 29, 2015).

3.5 The brand

Bus Rapid Transit has emerged around the world as an improved form of bus travel, and transit

agencies like Viva have worked to market and promote these benefits. Since inception in 2005,

the Viva brand has been effectively advertised using a prominent blue logo with various transit

routes named by colour. When initiated in 2005, the new brand was expected to produce a 30%

Contract flipping leaves York transit employees feeling like ‘temporary workforce’

Legal loophole results in mass lay-offs, low wages, and job insecurity.



KEITH BEATY / TORONTO STAR [Order this photo](#)

Kathy Breen lost her job as a York Region Transit bus driver after the service provider changed. She says workers fulfilling this important public service should at least have job security so they can keep transit goers safe.

Figure 3.5 - Toronto Star article (Mojtehedzadeh, 2015)

increase in transit ridership with an investment of over \$1 million for a six-month (October to March 2005) marketing and brand strategy (Aikins, 2004). According to a lead engineer who worked on the Rapidway project, ridership increased by 10% on the Highway 7 corridor after the BRT was implemented (2015, personal interview).

Since the Rapidway's inception, "The branding process included new vehicles, a transfer hub in Richmond Hill and more than 90 new stops along Yonge Street and Highway 7 that will become the major routes of the new BRT system" (Ng, May, & Popik, 2014, 3). In the years preceding the introduction of Viva, it is not clear how much was spent on marketing and branding. According to an article in *Novae Res Urbis* from December 2004, the "York Consortium 2002, in a 'joint RFP selection process with YRT,' chose the (branding) consultant in September 2003", an "unspecified budget was allocated in year two", and "another report given to council in June says that an upset cost of \$377,000 was included in year three work plan to build and launch the brand" (Aikins, 2004). Presently, it is still difficult to extract a fair estimation of branding and marketing costs geared toward the Viva brand in general and the new vivaNext Rapidway service. According to Viva staff, there is no specific sum of branding costs, but rather these costs are incorporated into the total budget for each project found in annual and quarterly reports (personal communication, September 18, 2015). Another discussion was raised through a personal communication with Viva staff regarding marketing and branding costs with reference to a Request for Proposal (RFP) for a multi-year Advertising Agency Contract dated March 31, 2013. According to staff, the contract was awarded to Acart Communications Inc. at \$280,140.00, excluding taxes (personal communication, September 28,

2015). The RFP requests assistance in creating “a multi-year marketing and communications strategy, related advertising campaigns and media-buying services” (MERX, 2013).

Aside from being the first of its kind in the Greater Toronto Area (GTA) and providing “frequent, flexible, and comfortable rides”, Viva promotes their BRT vehicles as being “so un-bus like, we call them rapid transit vehicles and they’re like nothing you’ve experienced before” (York Region Transit, 2006). VivaNext president Mary-Frances Turner stated that “The blue Viva express buses, stops and lanes have been carefully branded to attract riders who could choose between a car and a bus” (Kalinowski, 2013). The brand is marketed as a premium service in comparison to typical bus transit service, and Viva differentiates itself from the local YRT service not only with premium buses, but by ensuring drivers wear formal clothing including a three-piece suit and bowtie (personal communication, November 29, 2015). In creating a more elite bus service, I was advised by a Viva employee that the Region was initially hesitant to add bicycle racks purchased by Veolia to the front of buses, because they would make buses appear less attractive. The racks remained in storage until transit users began complaining of the nuisance to have bicycles inside buses during peak service periods (personal communication, November 29, 2015).

Service frequency and off-board fare collection are major components of a fully functional BRT system. Viva stated that “Viva is so frequent, it doesn’t even need a schedule. Frequency is the hallmark of Viva with rapid transit vehicles arriving every 15 minutes or less, seven days a week” (York Region Transit, 2006).

3.6 The design

The design of the Rapidway uses elements common to Bus Rapid Transit systems around the world: off-board fare payment, transit signal priority, queue jump lanes where feasible, variable



Figure 3.6 – Crosswalks (Photo by author)

message signs, and higher frequency/less stops (Ng, May, & Popik, 2014, 3). Even though the Rapidway attempts to follow the fundamental principles of Bus Rapid Transit implementation, there are certain design concepts that have received criticism. The overall redesign of Highway 7 has meant an improved pedestrian realm in terms of wider sidewalks and polished

greenery, but a very different pedestrian experience when attempting to cross the Rapidway.

Instead of removing two lanes from the existing roadway to accommodate the dedicated busways, York Region has widened the corridor to accommodate the Rapidway and to maintain the existing 6 lanes of through traffic in both east and west directions (Marshall, 2013). Crossing the Rapidway can mean crossing 10 lanes of traffic or more, if you include left turn lanes and two bicycle lanes (Figure 3.7). Once making your way halfway across Highway 7, there are additional cross-walk buttons to accommodate transit riders getting off buses and pedestrians who did not make it completely across Highway 7 in one traffic intersection cycle (Figure 3.6). In addition to this, it is also difficult to transfer from local buses like the #1 Highway 7 bus which runs parallel to the Rapidway. Local YRT buses do not operate within the dedicated bus lane but

instead approach conventional curbside stops along Highway 7 making it cumbersome to transfer between lines (Marshall, 2013).



Figure 3.7 - Aerial view of Rapidway (Pinterest, 2014)

3.7 Accessibility services

Accessibility can refer to the ease or ability one has in accessing public transit which includes all persons with a disability or mobility issues. According to the American Public Transport Association (APTA), accessibility can be defined as “The extent to which facilities are barrier free and useable by persons with disabilities, including wheelchair users” (APTA, 2003). Viva offers a door-to-door service for persons with limited mobility called Mobility Plus, and all of their vehicles are low-floor or lift-equipped with blue and white international Symbol of Accessibility (ISA) wheelchair symbol (York Region, 2012a, 6). York Region has stated that “enabling disabled riders to access the full YRT/Viva Family of Services promotes greater

independence, inclusion and self-sufficiency” (York Region, 2012a, 6). Additionally, YRT is equipped with Dial-a-ride vans which is an on-request service whereby riders can call to have a ride directly from home for the same one-zone fare.

3.8 Cost to users

Viva operates in three distinct zones, and the cost to ride the service depends on which zones are travelled throughout one journey (Figure 3.8). As of January 1ST, 2015 the cost to ride the Viva network is \$4.00 within Zone 1 and \$5.00 if entering an additional zone (Alarcon, 2013). With a Presto Card, the fare decreases to \$3.40 for 1 Zone and \$4.40 for 2 Zone (York Region Transit, 2015a). There are also fare reductions for students, children, and seniors but when compared to other transit systems in the region, Viva is the most expensive in the GTA (Table 3.1) (Marshall, 2013). Marshall (2013) argues that while there were infrastructure improvements made in the form of BRT, “the rest of the bus network that feeds into the Viva spine is largely neglected.” This is a result of service cuts that have been made since 2010, cuts within the 2014 Service Plan, and the three month YRT strike that took place (Marshall, 2013). Viva fares have increased steadily over the past five years with fares recently changing as of July 1, 2015 (Table 3.2) (York Region Transit, 2015b).

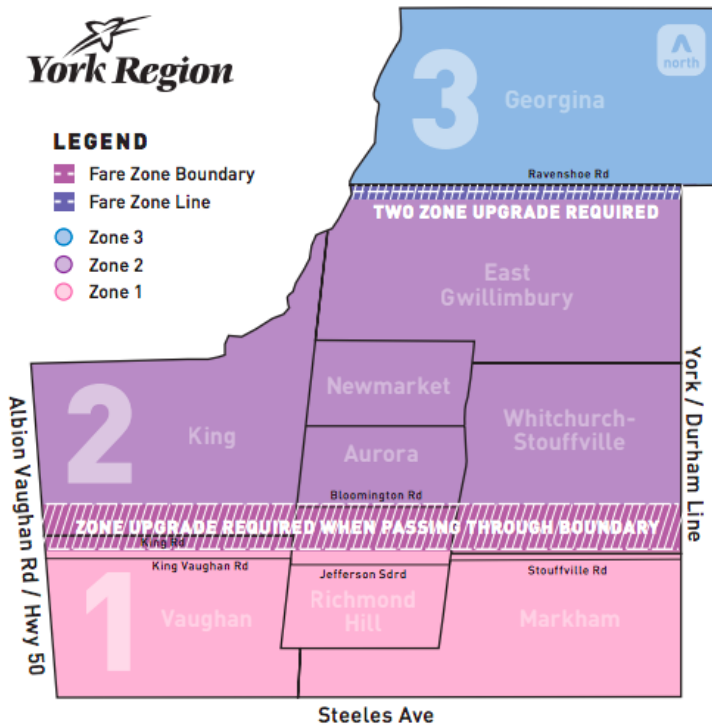


Figure 3.8 - York Region zone map (York Region Transit, 2011)

Fare Category	2013 YRT/Viva	2014 YRT/Viva Proposed	2013 TTC	2013 Mississauga Transit (Mi-Way)	2013 Brampton Transit	2013 Oakville Transit	2013 Burlington Transit	2013 Hamilton Street Railway	2013 Durham Transit
Adult Cash	\$3.75	\$4.00	\$3.00	\$3.25	\$3.50	\$3.25	\$3.25	\$2.55	\$3.10
Adult Ticket	\$3.00	\$3.30	\$2.65	\$2.70	\$2.75	\$2.70	\$2.70	\$2.00	\$2.78
Adult Monthly Pass	\$120.00	\$132.00	\$128.50	\$120.00	\$115.00	\$99.00	\$95.00	\$87.00	\$103.00
Student Cash	\$3.75	\$4.00	\$2.00	\$3.25	\$3.50	\$3.25	\$3.25	\$2.55	\$3.10
Student Ticket	\$2.30	\$2.50	\$1.80	\$2.25	\$2.50	\$2.20	\$1.85	\$1.65	\$2.58
Student Monthly Pass	\$90.00	\$99.00	\$106.00	\$101.00	\$105.00	\$65.00	\$69.00	\$71.00	\$86.50
Senior Cash	\$3.75	\$4.00	\$2.00	\$3.25	\$1.00	\$3.25	\$3.25	\$2.55	\$2.00
Senior Ticket	\$1.85	\$2.00	\$1.80	\$1.80	\$1.55	\$1.75	\$1.85	\$2.00	\$1.90
Senior / Child Monthly Pass	\$55.00	\$60.50	\$106.00	\$50.00	\$50.00	\$50.00	\$58.50	\$87.00	\$41.50
Child Cash	\$3.75	\$4.00	\$0.75	\$3.25	\$3.50	\$3.25	\$1.90	\$2.55	\$2.00
Child Ticket	\$1.85	\$2.00	\$0.60	\$1.65	\$2.50	\$2.20	\$1.55	\$1.65	\$1.90
GTA Weekly Pass	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	n/a	n/a	n/a	n/a
GO Rail Fare Integration	\$0.75	\$0.75	n/a	\$0.75	\$0.70	\$0.70	\$0.70	(\$1.50)	\$0.65

Table 3.1 – Fare comparison between transit agencies (York Region, 2013a, 13)

YRT/Viva fare comparison 2010 - 2016

	Fare Category	2010	2011	2012	2013	2014 YRT/Viva Current	2015 YRT/Viva Proposed	2016 YRT/Viva Proposed
Adult	Cash Fare	3.25	3.25	3.50	3.75	4.00	4.00	4.00
	Tickets/PRESTO	2.60	2.60	2.80	3.00	3.30	3.40	3.50
	Monthly Pass	105.00	105.00	115.00	120.00	132.00	136.00	140.00
Student	Cash Fare	3.25	3.25	3.50	3.75	4.00	4.00	4.00
	Tickets/PRESTO	1.90	1.90	2.10	2.30	2.50	2.60	2.70
	Monthly Pass	75.00	75.00	85.00	90.00	99.00	102.00	105.00
Senior	Cash Fare	3.25	3.25	3.50	3.75	4.00	4.00	4.00
	Tickets/PRESTO	1.50	1.50	1.65	1.85	2.00	2.10	2.20
	Monthly Pass	46.00	46.00	50.00	55.00	55.00	57.00	59.00
Child	Cash Fare	3.25	3.25	3.50	3.75	4.00	4.00	4.00
	Tickets/PRESTO	1.50	1.50	1.65	1.85	2.00	2.10	2.20
	Monthly Pass	46.00	46.00	50.00	55.00	55.00	57.00	59.00

Table 3.2 – YRT/Viva fare comparison 2010 – 2016 (York Region, 2015c, 7)

A University of Waterloo student and York Region resident, Jesse Feld, put together a petition regarding fare increases on Change.org on October 3, 2013 (personal communication, September 21, 2015). The petition which gained support from 2337 individuals, was featured in York University's Excalibur, and is one example of a grass roots initiative to fight ever-increasing costs placed onto transit users (Feld, 2013). Feld stated in his letter to Chief Administrative Officer for the Regional Municipality of York, C. Terin, and York Region Transit and Acting Commissioner of Transportation and Community Planning, Richard Leary, that even though YRT and Viva maintain a monopoly of transit services in York Region, there should still be emphasis placed on the fact that transit is a public service and public good. Feld stated, "Although your big empty red lanes and shiny new blue buses may look pretty, you are paying for them by having a worse service for those they are there to serve" (Feld, 2013).

3.9 The funding model

The vivaNext Rapidway is a Public Private Partnership or P3 which is an alternative means to funding large-scale infrastructure projects like public transit. The P3 model is a partnership between government and the private sector in which one or both parties carry the cost of construction and further maintenance and renewal of the infrastructure. According to the Canadian Council for Public-Private Partnerships (CCCPP), whose mission is to “promote innovative approaches to infrastructure development and service delivery through public-private partnerships with all levels of government”, a P3 can be any transaction which involves both the public and private sector (CCCPP, 2011, 4 & 10). Many municipalities have turned to this model as a result of considerable backlog and limited resources for financing the renewal of aging and new infrastructure (CCCPP, 2011, 9). The Viva Transit model of procurement falls under a specific approach known as Design-Build-Finance-Operate-Maintain or DBFOM (Figure 3.9). According to the CCCPP, the DBFOM approach places the most risk and responsibility on the private sector, and is also the closest P3 model to full privatization of the infrastructure. In this contract “...tenders are sought for an integrated service to comprise design construction and maintenance of an asset and long-term operation by the contractor to meet defined specification objectives” (CCCPP, 2011, 22). According to York Region, “One of the challenges with the Region’s service delivery model has been to achieve a truly competitive marketplace at the contract procurement stage. The primary issue is that it is extremely difficult for prospective bidders to secure property and set up bus maintenance garages and storage facilities” (York Region, 2010).

DBFOM Project Structure

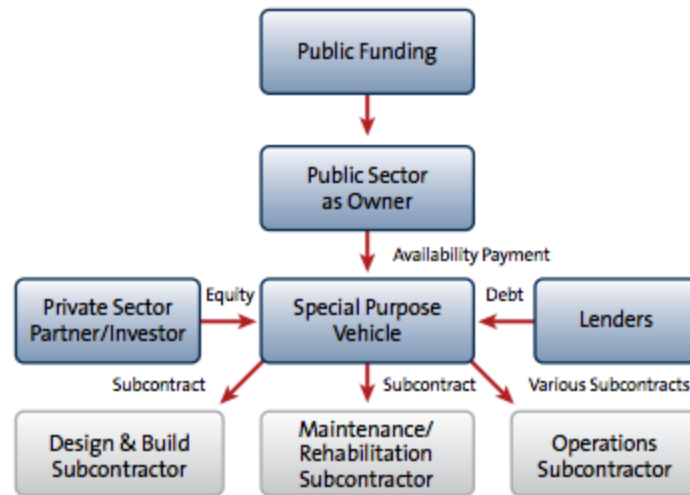


Figure 3.9 – DBFOM Structure (CCPPP, 2011, 23)

The vivaNext Rapidway is Canada’s first public-private transit partnership which is a contract between York Region and the York Consortium 2002 (YC2002), and is led by AECOM a global engineering consulting firm (AECOM, 2015), (Ng, May, & Popik, 2014, 3). “YC2002 completed the preliminary engineering design of the funded projects with expectation of construction being completed before 2020” (Ng, May, & Popik, 2014, 3).

Chapter 4 - Equity - Where to begin?

At a time when the gap between rich and poor continues to grow in the Greater Toronto Area (GTA), where automobile-centric suburban landscapes continue to flourish amidst the steady decline of prime agricultural land, where securing funding to build more transit becomes increasingly difficult within existing budgets, and when growth and economic development remain the dominating imperatives within planning policy, it becomes increasingly important to raise a discussion surrounding equity, mobility, and the transportation planning process in general. Introducing the theme of equity into planning policy and public transit planning may be arduous as it would be difficult to quantify such a term into one standardized metric for future transit planning use. Although transit is a critical piece of infrastructure that can be capital intensive, Murray & Davis (2001) state that “public transportation services are rarely monitored for effectiveness in serving the transport disadvantaged” (p.595). Language that evokes themes of equity is mentioned in many transportation planning documents, but as Foth, Manaugh, and El-Geneidy (2013) mention, “very few explain how it is measured or include performance measurements to follow up on this goal” (p.4). Defining equity however, is important in how we plan cities and distribute services in the long term especially when determining the location, price, and frequency of future public transit projects.

4.1 Equity-oriented planning in Cleveland

The story of former Cleveland planning director Norman Krumholz helps in our understanding of equity through his attempt at orienting planning practices and policy around equity and the

public interest while grappling with various political transitions. Krumholz was the Director of Planning from 1969 to 1979, and during this time Cleveland faced issues related to population decline, ethnicity and race, and poverty. In writing the Cleveland Policy Planning Report, Krumholz and the City Planning Commission framed the plan around creating a more equitable society rather than strictly a new arrangement of land uses (Krumholz & Forester, 1990, 43). In this report, Krumholz defined equity planning as an effort to provide more choices to those who have few, if any choices (Krumholz, 1982, 163). Krumholz's definition stems from "what he perceived to be the unfairness and exploitative nature of the urban development process, a process that excluded the poor from the suburbs and concentrated them in declining inner-city areas" (Garrett & Taylor, 1999, 8). A redistribution of resources could create more choice for the poor in terms of where to live, where to shop, where to work, and how to experience a city.

Krumholz and his team grappled with various philosophical and strategic questions when considering the implications of implementing an equity lens to planning. Firstly, the team had to redefine city planning in a new way that best represented the changing landscape in Cleveland and could most benefit the working-class and poor populations who were underserved by the city. Similar to other Rust Belt cities, Cleveland faced significant urban and economic decline. The population of Cleveland had been dropping for several decades beginning in the 1950s, and most dramatically in the 1970s. At that same time, average income and land value declined, crime and unemployment increased, affluent families departed the city, the African-American population increased from 16 to 44%, the majority of the poor population were persons of colour, and large disparities between rich and poor arose between

city and surrounding region (Krumholz, 1982, 164). Krumholz saw this city-suburban divide as “not the result of simple coincidence or of market forces, but as partially the result of an urban development process which was inherently exploitative of the poor and especially of the minority poor” (Krumholz, 1982, 165).

At this time there had been no request made to consider a new approach to planning however, Krumholz highlights four main reasons for attempting a new approach: “1. The urgent reality of the conditions in Cleveland, 2. The inherent unfairness and exploitative nature of urban development processes, 3. The inability of local politics to address these problems, and finally, 4. Our conception of the ethics of professional planning practice” (Krumholz, 1982, 163). Many of the issues related to race and poverty were not being solved by politicians and planners at the time, and were even being exacerbated by zoning codes that favoured certain uses, restrictive covenants on the sale of land, increasing housing prices, informal customs, and cooperation agreements that limited the location of public housing to the central city and the most struggling neighbourhoods (Krumholz, 1982, 165). Krumholz and his team made it their mission to influence the shaping of “a society where justice and equity were at least as important as efficiency” (Krumholz, 1982, 166). Krumholz’s approach was in some ways a critique of capitalism giving one the impression that an ethical planner is one who speaks out against the inherent inequities that become heightened within this system.

Reflecting back on the professional code of ethics for planners, Krumholz used this as a foundation to ensure that the responsibility of planners be focussed on the public interest and

disadvantaged groups rather than solely on zoning, land use, and urban design (Krumholz, 1982, 165). Krumholz asked, “What gave us the right to choose our own goals and objectives? Did our legitimacy flow from the planning profession, or its statement of proper ethical behavior? How could we justify aid to those in need?” (Krumholz & Forester, 1990, 45). As a planner, Krumholz’s greatest success was negotiating the transfer of the Cleveland Transit System (CTS) to the Greater Cleveland Regional Transit Authority (RTA) in 1975. Krumholz and his team understood that problems associated with transportation were often defined too simplistically in Cleveland. For example, problems were associated with congestion, private vehicle access, and off-street parking, when in reality the situation was more complex. For Krumholz, there existed a greater need “to improve the mobility of Cleveland’s transit-dependent population, those families who lacked automobile’s and who depended entirely on public transit” (Krumholz, 1982, 166).

4.2 Defining equity

In order to fully understand equity as it relates to public transit and transportation planning, it is imperative to establish a working definition of the term. The Public Health Agency of Canada’s definition of the term is an appropriate one to begin with because it not only defines equity in terms of accessing services, but makes note that equity and equality are not the same.

“Equity means fairness. Equity...means that peoples’ needs guide the distribution of opportunities for well-being. Equity...is not the same as equality. Inequities occur as a consequence of differences in opportunity, which result, for example in unequal access to health services, nutritious food or adequate housing. In such cases, inequalities in health

status arise as a consequence of inequities in opportunities in life” (Public Health Agency of Canada, 2015).

When relating equity specifically to transportation planning, the term equity can have a variety of different meanings and associations. As Foth, Manaugh, and El-Geneidy (2013) mention, “Determining equity is difficult because there is no standard definition of distributional equity for transportation benefits” (p.4).

4.3 Literature review

Lucy (1981) explains that equity is an issue of distributive justice concerning what is fair (p.448). Lucy offers conceptions of equity for planners dealing with issues having spatial dimensions and more broadly, the distribution of municipal services (p.448). Equity and equality are not interchangeable since providing equal access to transit could equate to or result in a one-size-fits-all approach. Equity translates differently, assuming that no two persons are the same, and that we all have different mobility needs. An equity approach would require every transit system to be uniquely designed to cater to local conditions and to residents who require assistance accessing the system. Equality is when everyone receives the same service based on need, delivery, and outcome, whereas equity means to target those who are not already better off or disadvantaged (Lucy, 1981, 448). Treating everyone the same implies fairness, whereas “equity does not require that each person be treated the same, only appropriately” (Hertel, Keil, & Collens, 2015, 8). Transit equity, as Hertel, Keil, and Collens mention, is a desired

outcome of “removing structural obstacles from the fair distribution of goods and services by the regional transportation system” (Hertel, Keil, & Collens, 2015, 8).

Litman (2014) summarizes equity in terms of “the distribution of impacts (benefits and costs) and whether that distribution is considered fair and appropriate.” However, Litman explains that transport equity analysis can be difficult as there are “several types of equity, many potential impacts to consider, various ways to measure impacts, and many possible ways to categorize people” (Litman, 2014, 2). Litman uses three types of equity in his report, horizontal equity, vertical equity with regard to income and social class, and vertical equity with regard to mobility need and ability. Similar to Lucy’s definition of equality, horizontal equity can be referred to as fairness or egalitarianism in that all persons are seen as equal individuals receiving equal resources and bearing equal costs (Litman, 2014, 4). Vertical equity with regard to income and social class is concerned with social justice, environmental justice, and social inclusion. This definition of equity concerns itself with the distribution of impacts for individuals that vary in ability and need or income and social class (Litman, 2014, 4). Under this definition, groups who are transport disadvantaged are specifically targeted within transportation policy. The third definition of equity, vertical equity with regard to mobility need and ability, is concerned primarily with individuals who have mobility needs. The definition stresses the importance of universally accessible and inclusive design for all transport facilities to accommodate the users with special needs (Litman, 2014, 4). Foth, Manaugh, and El-Geneidy (2013) believe that vertical equity should be a primary objective in transit planning whereby “benefits are intentionally provided for one group, often low income, who cannot reasonably

afford the price of transportation.” In order to provide an equitable distribution of transit benefits, a minimum level of benefits needs to be established for “socially disadvantaged groups” improving the overall average and narrowing the gap between transit users (Foth, Manaugh, & El-Geneidy, 2013, 5).

Levine (2013) defines accessibility as the “ease of reaching destinations” rather than the “ease of movement,” meaning the number of interactions one can accomplish at a given time versus the speed at which one travels (p.144). Often we witness a fetishizing of speed and technology instead of prioritizing ridership or the need for improved mobility. Levine argues that deteriorating accessibility for non-drivers is a result of auto-oriented transportation planning, and that in urban regions throughout the world, public transit investments and fare systems often favour affluent commuters (p.142 & 144). “Privileged groups seek to use transportation planning to augment their accessibility, a process that can leave less-privileged populations worse off in relative or even absolute terms” (p.155). Levine explains that there are elements of transportation planning practice that have exacerbated transportation inequities and impeded a capacity to overcome them. In order to address these inequities, a capacity is required for decision-makers to reform transportation policy into a more equitable process since there are still impediments within the transportation planning practice (p.142 & 143). An example is the suburbs, where policies have been enacted to restrict development densities to create low-density environments – an accustomed lifestyle for commuters (Levine, 2013, 146).

Foth, Manaugh, and El-Geneidy (2013) provide a locally relevant and recent overview of transit accessibility and social need in the City of Toronto between the years 1996 and 2006. Their article provides a framework for defining accessibility and mobility in relation to transit. The authors refer to various definitions of accessibility, one being Hanson (1959) who defines accessibility as the number of potential opportunities for interaction with activities and employment, focussing on the importance of reaching desired destinations, such as shopping, school, or work (Foth, Manaugh, & El-Geneidy, 2013, 2), (Hanson, 1959, 73). “In general terms, accessibility is a measurement of the spatial distribution of activities about a point, adjusted for the ability and the desire of people or firms to overcome spatial separation” (Hanson, 1959, 73). Foth, Manaugh, and El-Geneidy use social indicators based on census tract level socio-economic characteristics to measure the relationship between social disadvantage and accessibility to jobs and travel time over the 10-year period (p.1). “Not only does better job accessibility by transit for lower-wage workers address equity concerns, but it aids a regional economy and labour market by allowing for better worker-job matches across an urban region” (p.4). The authors argue that Hulchanski’s methodology of determining transit accessibility is too simplified in comparison, using the number of subway stops in the area and the number of jobs per 100 ‘working age population’ as indicators. These indicators, they argue, only approximate job accessibility or travel time to work (p.16).

4.4 Social exclusion

Public transit has the potential to be used as an instrument to enhance inclusivity, by providing a means of travel for people who do not own a private vehicle, and who need to access things

like health care, nutritious food, and meaningful employment. Basically, transit is needed to access everything connected to everyday life. Broadly speaking, social exclusion refers to a multitude of barriers which exclude people from fully participating in society. Social exclusion can be referred to as “a dynamic process which shuts people off from the benefits enjoyed by full citizens” (Murie & Musterd, 2011, 182). Currie (2011) analyses the connection between the concepts of well-being, transport disadvantage, and social exclusion using existing literature, research, and methodologies. Using these findings, Currie highlights the various reasons as to why people become transport disadvantaged, who these groups are, and the types of social exclusion that exist such as physical, locational, economic, urban form etc. (p.17). Currie categorises transport disadvantaged into specific groups based on age, income, language difficulties, households with single or no vehicle, and the disabled (Currie, 2011, 19). Lack of income and limited access to a vehicle were major disadvantages. Stanley (2011) explains that when limited mobility options exist, “forced car ownership” occurs whereby households with limited financial flexibility are forced to drive out of necessity (p.22). Currie (2011) notes that social exclusion can be a result of a lack of income, employment options, social support, and access to daily activities due to location and poor access to local transport options (p.3).

As Kipfer mentions, “[m]ass transit made it possible for social relations to be stretched between work and residence, facilitating (not causing) the segregation of social groups along lines of race and class...” (Kipfer, 2012). A report titled “The Spatial Trap” from the Wellesley Institute emphasizes another form of segregation as a result of transit accessibility and affordability. The Spatial Trap refers to groups and neighbourhoods that are socially excluded

from economic, social, and health benefits as a result of transit planning that focusses primarily on the economic benefits of transit infrastructure rather than social determinants like “1) the physical environment (eg. Pollution); 2) personal health habits (eg. Physical activity) and 3) social factors (e.g., income, education, housing)” (Wray, 2013, 3). The report also cites the work of Garrett and Taylor (1999) who argue that transportation planning largely favours “choice riders”, riders who own a private vehicle, and who have average or above average income and social position. Priority is placed on attracting these riders in order to ease congestion, and to connect them from suburban residential regions to dense urban areas where employment is predominantly concentrated (Wray, 2013, 4), (Garrett & Taylor, 1999, 9). In addition to this, Garret and Taylor mention that a bias exists in funding new capital projects instead of maintenance and operations of existing networks. This they argue, is a result of political decision-making that favours the views of dominant voters who prefer their taxes be geared to major capital investments rather than funding planning, operation, or maintenance (Wray, 2013, 4), (Garett & Taylor, 1999, 21). In addition to this, lower income residents have far less influence politically to advocate for “a readjustment of funding or for a realignment of infrastructure investment priorities for their benefit” (Hertel, Keil, & Collens, 2015, 8).

4.5 Grassroots organizations

Groups have mobilized in advocacy for equitable, accessible, and free transit in the GTA like the Greater Toronto Workers Assembly who have campaigned for free and accessible transit, the Fair Fare Coalition who have demanded that transit passes be subsidized for all low-income citizens of Toronto, and TTCriders who advocate for affordable fares, a fully accessible transit

system, service that connects underserved neighbourhoods, environmental sustainability, and respect for TTC employees and riders (GTWA, 2015), (FFC, 2015), (TTCriders, 2015).

In York Region a grassroots agency exists with a focus on improved mobility called Routes in Georgina (formerly Transit Georgina). The organization is volunteer-based and offers “accessible and affordable transportation to people who are restricted due to life circumstances such as financial hardship, health issues, and geographic, social or cultural isolation” (Routes,2015). If a resident is in need of transport services they may request a ride by phone, and a screened volunteer will pick them up using their own personal vehicle. In addition, a non-profit group called People Ensuring Quality exists in Newmarket supporting persons with intellectual disabilities in York Region. In an effort to battle poverty in the region, the organization was able to convince YRT, using a 327-signature petition, to temporarily discount fares (50% reduction) for low-income residents in York Region as a pilot project (Banner, 2011b).

4.6 What informants had to say

During the interview process, the majority of respondents were asked how they would define equity and their thoughts on public transit.

Jay Pitter is a senior communications and public engagement specialist. Jay had recently written several transit equity pieces on topics related to bullying on transit, gender and violence, transit users with invisible disabilities, weight discrimination, and commuting as a mother and as a youth. In addressing key challenges to achieving equity in her articles she

states that, “Professional discipline silos, inflexible funding processes and formulas, regional political arrangements, citizens with variegated levels of social power, and the rate of urban development are key factors, which also pose significant challenges” (Pitter,2015).

When asked her thoughts on public transit Jay stated:

“When people talk about public transit they often talk about getting people from point A to point B when actually that is the secondary imperative. The primary public transit imperative is to connect people with each other and opportunities, enhance public health, desegregate poor and isolated communities, and reduce strain on the environment. Getting a bunch of people from point A to point B is actually “the how” not “the what.” Jay noted that transit is one of the few public spaces where people across every class strata, culture, ability, sexual identity etc. regularly occupy shared space. “That’s a pretty big deal fraught with challenges and rich opportunities” (Pitter, 2015 personal interview).

When asked how she would define equity Jay stated that:

“Equity has a very particular definition outside of planning and place-making.” Within planning, “equity begins with clearly articulating a quality of user experience, and then taking the steps to ensure that all of those users (sometimes with competing needs) have that high quality experience. For this to happen, you must understand how to integrate equity principles pertaining to fairness, justice, accessibility into all areas of transit - from design, planning, and service delivery. This requires multiple strategies to accommodate a wide swath of users. Jay notes that in order for this to happen, “there needs to be a wide range of different strategies to accommodate all users. you need to be nuanced and not shy away from a multi-pronged approach. Equity within planning doesn’t mean the same for everyone, that’s actually a cop-out” (Pitter, 2015 personal interview).

Sean Hertel is an urban planning consultant with clients from the public sector, and a research fellow at the City Institute at York University. For 12 years, Sean held various senior positions with York Region in the Community Planning department and was seconded for a year with Viva Rapid Transit. During this time most of his work took place in the geographic area of

Markham, as well as doing intensification both from a development and policy perspective across the region.

When asked what equity means when we discuss transit, Sean stated:

“Equity as I have come to define it both professionally and in my work, is the fair distribution of costs and benefits across the system. Compared to equality, equity says that not everyone is treated the same, you’re treated appropriately. Translating this to Markham, there are those who have different transit needs because people work differently, have different physical mobility challenges, and different economic needs. Equity means, don’t treat everyone the same in Markham, but offer a range of choices that accurately reflects the ridership pool in Markham. This can mean rapid transit, conventional transit, handy transit, carpooling, travel demand management etc. Intrinsic to that is that you have to know who you are serving. If you do not know who you are serving and what their needs are, then equity is virtually impossible. Then you get caught in this downward spiral of transit equality which manifests in Toronto with ‘subways, subways, subways’, or communities saying that they deserve something” (Hertel, 2015 personal interview).

Jane Wedlock, is the Manager of Public Affairs for United Way Toronto and York Region.

She has worked extensively in the non-profit sector exploring social issues such as food insecurity, housing, homelessness, and youth-at-risk. For Jane, “Public transit is what allows people to be included in our communities, participate civically, access employment, and to move around” (Wedlock, 2015 personal interview). When emphasizing terms like sustainability, “there should also be equal consideration for affordability and accessibility when discussing transit” (Wedlock, 2015 personal interview).

Jane was asked the question, “With the greatest proportion of low-income earners being concentrated in Markham with a large number being new immigrants, is using equity as a

framework for planning a fair consideration for new public transit systems?” Jane responded with:

“Absolutely, the people that design transit systems want people to get out of their cars and use transit, but there are people that don’t have access to cars. If we want to talk about healthy, inclusive communities (and this language is throughout planning documents), an equity lens makes infinite sense to ask who’s not included and why are they not included?” Jane also believes that an equity lens is not an added cost to the process, but rather a lens to look through. “The reason that we now need all this transportation is because we haven’t planned our communities very well, and we are now trying to play catch-up on how we move people around” (Wedlock, 2015 personal interview).

Jane also explained that it is crucial to identify the barriers that exist for transit users in order to increase the number of people on transit. “Transportation and the ability to move is the lifeblood of a community. For people to not have access is very problematic.” In Markham where many newcomers choose to reside, transit service is physically there, but Jane asks, “Can they afford to actually use the service? Do they know how it works? What’s in place to help people navigate?”

4.7 Choice riders

At a recent event titled Engineering the Future of GTA Transportation Symposium at the Markham Event Center on March 25, 2015 there were more than 350 persons in attendance. The audience consisted of current politicians, developers, planners, engineers from the region (including YRT staff), and students. During his presentation on congestion in the GTA, Martin Collier, Director of Healthy Transport Consulting, posed the question for the audience: “has anyone taken transit to get to the event today?” Of the 350 persons in attendance, only two people raised their hands. Collier then stressed that in order to combat congestion, “we need

to get more choice riders, those who drove here today to start using transit” (Collier, 2015).

Coincidentally, a similar question was asked at an Urban Land Institute (ULI) event on growth and development in York Region at Le Parc Conference Centre, Markham on September 29, 2015. Of the approximately 250 persons in attendance, only one person raised their hand indicating that they had taken transit to attend the event. Given that both these rooms were filled with planners, engineers, developers, and politicians from Markham and York Region who more than likely have had some influence on transit and land use planning in the region, this was particularly surprising. In addition to this, I have also been told that most Viva bus drivers choose to take their cars to work because they are not granted free transit service because the cost to ride is too expensive in comparison (personal communication, November 29, 2015). This begs the question, should transit be predicated on the belief that drivers should be convinced of the benefits of transit? Existing transit-dependants, and groups unable to drive are already well aware of the importance of transit, and therefore more attention should be paid to these users.

When asked his opinion on transit agencies focussing their attention on “choice riders”, Sean Hertel replied by saying:

“Initially, while working with York Region, three years before Viva Quickstart was launched in 2005, I was trying to find out who the future Viva riders were going to be. It was quickly discussed that it would be the commuters, the people that have two or three cars in their driveway. We were looking at ways that we could get drivers to leave the second or third car at home to prevent them from driving or owning an additional vehicle. Right away, from an equity perspective, this may be problematic because there is a whole, vast group of people who are largely invisible who don’t even have access to a car that we would need to reach. These people may not even access to the very corridors where transit is planned. Another problem buried in that, is this whole car, non-car binary of equality. If you don’t have a car, then we need to serve you. To me

this is not helpful. I think Metrolinx did the right thing by trying to focus in on the commuter, but certainly they realized that there is a whole other group - lower income groups travelling a large distance to work because they cannot afford to live closer to their workplace. How do you reach those people? I think they launched the service with the understanding that they would come to learn who those people were in the fullness of time. Was there a specific strategy to target or achieve equity to accommodate a larger group of people? I don't think it was deliberately stated, but it was certainly an expectation to provide mobility to more people. First and foremost, the target was the commuter. It is in the very nature of the buses. They wanted comfortable, Wi-Fi, worktables, things that appeal to more business-type people with laptops and things for work. This for me is a strong visual cue for the market that was targeted."

Chapter 5 - Political economy framework

“...[M]ass transportation is intimately tied not only to the physical form of cities, towns and suburbs. It is profoundly shaped by the deeper social structures of imperial capitalism” (Kipfer, 2012). A political economy theoretical framework is used as a means of critically assessing public transit planning processes. Underlying this paper is a belief that the process as it exists presently, is inequitable, creating spatial differences that affect everyone’s quality of life. In the neoliberal era, inequality is heightened, and the need to achieve social equity becomes greater. But, one can ask, is it realistically possible to consider an equity lens within transportation planning practice when policy, governance, and growth are framed around neoliberal and capitalist principles? If disparities associated with transit access such as poverty, class, race, gender need to be addressed, where do we begin when current structures perpetuate inequality, polarity, and uneven urban development? (Pitter, 2015).

5.1 Urban Regime theory

Coalitions of public and private interests that align to “initiate development or retard disinvestment in a particular city” are known as urban regimes (Hackworth, 2007, 62). Urban Regime theory is used to better understand the public-private partnership dynamic in my assessment of the vivaNext Rapidway in Markham. Urban Regime theory was first developed in the 1980s by Clarence Stone, an American Political Science and Public Policy Professor from The George Washington University, and is used to understand how local governments and private actors assemble the capacity to govern (Mossberger & Stoker, 2001, 812). Within a complex and fragmented political governance structure, regime theory explores not only who governs

but how they govern amidst varying competing interests (Stoker, 1995, 57). Stoker argues that “[i]n a complex society the crucial act of power is the capacity to provide leadership and a mode of operation that enables significant tasks to be done” (p.69). This form of power is initiated when various actors and institutions bring together resources, skills, and purposes to form a long term coalition - a regime. Private contractors provide the resources to operate and maintain the Rapidway in partnership with York Region who governs the entire process. Once leadership is secured, the regime can effectively establish a monopoly over major choices facing their community (Stoker, 1995, 69).

As both governmental and non-governmental actors co-ordinate to meet economic and social challenges, the role of local government continues to shift and becomes more decentralized (p.54). The theory is relevant to the research surrounding discussions on serving transit disadvantaged groups since “[r]egime theorists argue that the organization of politics leads to very inadequate forms of popular control and makes government less responsive to socioeconomically disadvantaged groups” (Stoker, 1995, 56). In turning to Urban Regime theory, the research assumes that regimes as they exist today are not able to effectively overcome issues documented in the transit equity literature surrounding access for transit users who are most disadvantaged.

Since the relationships between various actors that exist in policy development can be so complex to understand as Stoker (1995) notes, Regime Theory offers a broad conceptual framework to the research in order to guide the analysis of public and private actors involved in the Rapidway (p.66). As Stone (1993) argues, the conceptual difference between public and private sector actors is ambiguous when applied to the empirical realities of urban governance

(p.6). Stone also points out that there are four different types of regimes: maintenance or caretaker regimes, development regimes, middle-class progressive regimes, and lower-class opportunity expansion regimes. The regime formed in the case of the Rapidway study best fits Stone's description of a development regime since this type of regime is most concerned with changing land use in order to promote growth or counter decline (Mossberger & Stoker, 2001, 813), (Stone, 1993, 18). As governments continue to become more decentralized since Stokers' work was conceptualized, it becomes increasingly difficult to decipher how coalitions of actors coalesce. This is particularly true for the Rapidway P3 partnership, as there are many actors coming together, with various roles, making the relationship between York Region Transit and the private contractors difficult to understand. Regime Theory provides a conceptual and analytical tool to understand how these groups cooperate through a coalition in order to produce effective decision-making capabilities.

5.2 Public-private partnerships

The review of political economy literature highlights the ever increasing role of the private sector in designing, building, and operating public infrastructure. In his (1995) review of regime theory, Stoker states that "regime studies need to explore the dynamics of regime change" in addition to "regime continuity" (p.67). The structural changes that have taken place in developing a private transit system in York Region in addition to YRT, represent a change in the relationship between provincial and municipal governments, and public transit agencies. It also represents a further shift from "public" transit to "private." As Kipfer (2012) reminds us, "public transit was built on the ruins of private transportation networks." As a result of the market's

inability to organize mass transportation, transportation like “private rail, subway and trolley lines were taken over and transformed into transit agencies and railway corporations” (Kipfer, 2012). In the present-day era, there appears to be a shift back to incorporating some degree of private sector involvement in public transportation. Public-private partnerships have not only become an acceptable means for financing large-scale public transit projects, but they are increasingly becoming the preferred option.

For the “ruling-class voices,” transit is now seen as a way to expand the private-sector role in supplying transportation (Kipfer, 2012). On June 18, 2015, former Prime Minister Stephen Harper announced a new Public Transit Fund (PTF) to promote transit investment “in a manner that is affordable for taxpayers and efficient for consumers” (Office of the Prime Minister of Canada, 2015). The main objective of the PTF was to support “large-scale public transit projects to address traffic congestion, reduce travel time for goods and people, and support economic growth in Canada’s largest cities” (Office of the Prime Minister of Canada, 2015). The Fund was to be administered through PPP Canada whose mandate is “to improve the delivery of public infrastructure by achieving better value, timeliness and accountability to taxpayers, through P3s” (P3 Canada, 2015). In response to the PTF, the Canadian Council for Public-Private Partnerships (CCPPP) deemed this “a critical step to reducing congestion, increasing productivity, and improving the lives of Canadians living in our biggest cities. It also further promotes the use of Canada's proven P3 approach to infrastructure development” (CCPPP, 2015).

According to Hackworth (2007), public-private partnerships (P3's) are the foundation of neoliberal governance, as municipal governments are expected more and more to serve an "entrepreneurial" role as market and growth facilitators rather than serving a "managerialist" role (p.61). This is relevant of course since the partnership that exists for the vivaNext Rapidway is an example of a P3 transit system that aligns a regional government and its transit agency, with private operators, with a goal of providing enhanced transit service, diverting people from cars to transit, and stimulating growth within the Highway 7 corridor. Rapid transit on Highway 7 acts as a catalyst for new development, and new development provides greater ridership, critical for a private agency that prefers the highest investment return from ridership.

One of the most fundamental questions comes to our attention once again, who is public transit intended to benefit? Also, why is the private sector interested in financing, constructing, and/or operating a transit system when the majority of networks around the world operate at a loss, relying on public subsidy to balance the budget? In fact, the subsidy that YRT/Viva receives is one of the highest in North America at \$4.49 per rider. In comparison, the Toronto Transit Commission receives the lowest subsidy in North America at \$0.79 per rider, yet the two systems overlap geographically (Palisoc, 2014). Figure 5.1 illustrates that the "York Region tax payers subsidize transit at a higher rate than the Canadian average" (York Region, 2015, 5). Routes that have a high subsidy rate, sometimes three times the cost to ride, are adjusted or removed from the network (York Region Transit, 2015, 88).

Figure 1
York Region Tax subsidy for transit vs. Average Canadian Revenue Sources

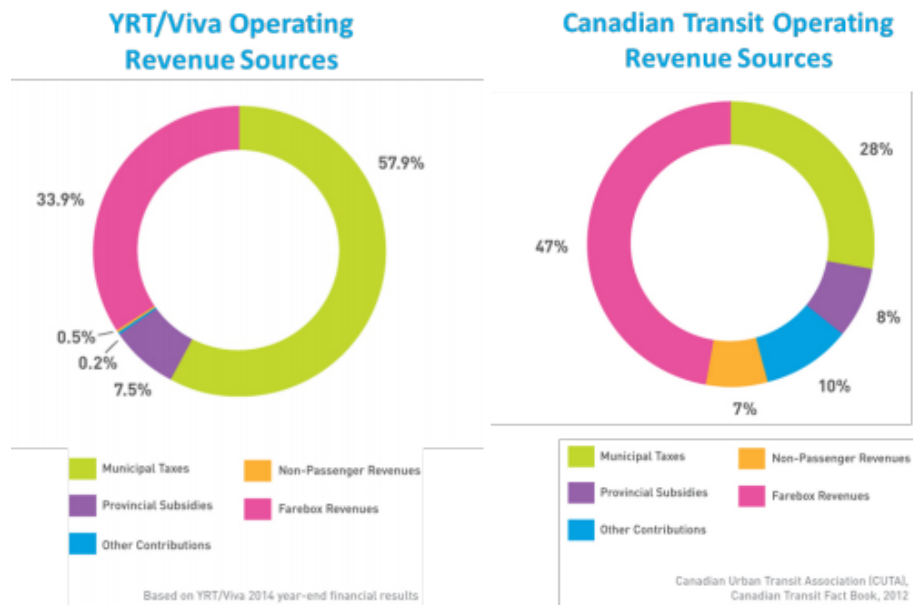


Figure 5.1 YR Tax subsidy vs. Canadian Revenue Sources (York Region, 2015, 5)

5.3 Growth machine

In understanding the forces that have shaped the transformation of Highway 7 in Markham, growth is identified as a common interest within urban regimes that guides the decision-making process. Molotch (1987) states that the city is a “growth machine” and that “[t]he desire for growth creates consensus among a wide range of elite groups, no matter how split they might be on other issues.” Although their perspectives may differ on how to achieve growth, “[E]lites use their growth consensus to eliminate any alternative vision of the purpose of local government or the meaning of community” (p.51).

Each parcel of land shares the potential for growth and capital accumulation through ownership. Coalitions come together to enhance the financial benefit and land-use potential for parcels of land (Molotch, 1976, 311). Molotch states that these individual land owners come together to gain resources from local governments to enhance the potential for growth in their locality. Additionally, “[e]ach locality, in striving to make these gains, is in competition with other localities because the degree of growth, at least at any given moment, is finite” (Molotch, 1976, 312). Localities compete with one another for the resources to build transit systems, and within a capitalist context, transportation in Canada has often been used as a tool to “sustain expanded and primary accumulation” and to “further real-estate speculation and promote boosterist urban development” (Kipfer, 2012).

5.4 Boosters

Molotch (1987) argues that the essence of local government as a dynamic political force is the effort to affect the outcome of growth distribution (p.313). On the inaugural opening of the first segment of the Rapidway on Highway 7, Ontario’s Minister of Transportation Steven Del Duca announced the importance of the project as it relates to growth, congestion, and quality of life in Markham. “This is an important project that is contributing to the growth and development within the City of Markham and will benefit the local economy for generations. (The Rapidway) ...will help ease congestion, and commuters will have a better way to get around on an improved rapid transit system” (vivaNext, 2014).

Common indicators that elites use to determine the success of growth is through the creation of jobs, attracting new industry, investors, and rising urban-area population (Molotch, 1976, 313). Remington Group and Quadrangle are the respective developer and architect for the Markham Centre, a development plan that the Globe and Mail called “a radical departure for suburbia” (Immen, 2014), (White, 2014). The development taking place in Markham Centre combines a dense mixed-use node with BRT, something that is not always achieved in the suburban context. Markham Centre is well-connected to the Rapidway, and is located at Warden Avenue and Highway 7. The project is 243 acres (98 hectares) and is one of the largest mixed-use developments in the country which includes high-density residential, retail, a Cineplex entertainment complex, and Aviva Canada’s new headquarters (White, 2014). “When Aviva Canada Inc. employees head to lunch from their new office tower in 2017, all they’ll have to do is cross the street to stroll a sidewalk lined with restaurants. After work, they’ll walk to bars, shopping and a Cineplex” (Immen, 2014). Aviva is moving their headquarters from Scarborough to a new 12-storey, 350,000 square foot building on Birchmount Road in Markham (Figure 5.2) (White, 2014).



Figure 5.2 – Aviva headquarters, Markham Centre (White, 2014)

The growth imperative in Markham was discussed by both the Senior Vice President of the Remington Group, Randy Peddigrew, and the Manager of Development for the Central Planning District, City of Markham, Richard Kendall, at the 2015 Ontario Professional Planners Institute (OPPI) Conference in Toronto. Remington is the major developer and land holder for the Markham Centre, leading the plan to significantly redevelop and intensify. Both presenters highlighted the importance of attracting employees and population to Markham while figuring out how to move these groups throughout the region. The two presenters explained how the proposed York University Markham campus and future sports arena would act not only as a catalyst for growth in Markham Centre but for the municipality as a whole (Peddigrew &

Kendall, 2015). Markham Centre was chosen as a satellite location for York University through a competitive bidding process. York University President Mamdouh Shoukri stated that “York University has always been York Region’s university. More students from York Region choose to attend York University than any other university. We are thrilled with the opportunity in Markham Centre and it is just the beginning of our plan to be in more locations across the region over time” (as quoted in yFile, 2014).

Molotch (1987) makes mention of the attraction of universities and professional sports teams as a way to stimulate growth and raise land values. Molotch states that “[t]he use of universities and colleges as a stimulus to growth is often made explicit by both the institution involved and the local civic boosters” (Logan & Molotch, 1987, 75). Additionally, professional sports teams serve many functions, “sustaining the growth ideology is clearly one of them,” and “instilling a spirit of civic jingoism regarding the ‘progress’ of the locality” (Logan & Molotch, 1987, 81), (Molotch, 1976, 315). Peddigrew agreed that, “York University is a huge cue for Markham and a real game changer” (Peddigrew & Kendall, 2015). In addition, Graeme Rouston, CEO of GTA Sports and Entertainment, had been trying to attract a National Hockey League (NHL) hockey team to Markham Centre with plans to build a 20,000-seat arena in partnership with Remington Group in 2012. In terms of funding, Rouston and Remington requested the City of Markham provide \$325-million to pay for the arena. “The private partners say they will repay half of the loan, \$162.5-million, while the city is to pay off the other half through volunteer levies on developers for new housing plus parking revenue and surcharges on event tickets” (Shoalts, 2013). The plan eventually fell through after concerns were expressed by local residents about the nature of funding, and the fact that Rouston had been accused of fraud in

the United States. In 2013 Roustan stated, “...hopefully when people who do background checks look at things, they go, ‘He didn’t kill anybody, there’s no criminal stuff there, there’s a couple civil things. It is what it is.’ Do I run from it? No” (as quoted in Shoalts, 2013). The plan was supposedly brought to the table again in June of 2015 when Roustan said he would consider Markham again in his effort to find a host arena in the GTA (Javed, 2015a).

5.5 Discussion

The political economy framework is not intended to argue that growth is detrimental to Markham, but rather acknowledging that regimes should not form solely on the basis of growth when planning transit systems. Using Hackworth (2007), the public-private partnership between private contractors and the region highlights the departure of the role of government from a managerial to an entrepreneurial role. This departure makes it difficult to discuss themes of equity in transit planning especially when preference is made to generate growth: financial, density, and population growth. The private-public sector relationship means that transit operates like a business, concerned primarily with maintaining revenues and ridership. A new approach to an already unique partnership could translate into greater risk for both parties, making it difficult to incorporate an equity lens.

Chapter 6 - In the Suburbs

“Sprawling on the fringes of the city
In geometric order
An insulated border
In between the bright lights
And the far unlit unknown
Growing up it all seems so one-sided
Opinions all provided
The future pre-decided
Detached and subdivided
In the mass production zone
Nowhere is the dreamer or the misfit so alone”
(Peart, 1982)

6.1 Locating the suburbs

The suburb, in the North American sense, has come to be known as a place outside of the city centre, automobile-oriented in design, and containing predominantly low-density dwellings. As Kipfer (2012) notes, automobiles were the foundation of suburbanization and the basis for urban sprawl. The term “suburb”, as Young (2011) describes, “is a relational concept that implies a built urban environment and a way of living that is different from another place in the city or urban region, most often a historical centre from which opinion and policy-makers view the place perceived by them as suburban” (p.78). The term suburb has various meanings, attached connotations, and the label can sometimes alter how decisions are made for a place deemed to be suburban.

According to York Region Transit, “a suburban area is generally a residential area, either existing as part of a city, or as a separate residential community, within commuting distance of a city” (York Region Transit, 2015, 18). The term however, may not even be suitable in describing Markham, as Young (2011) argues this label can imply that all suburbs are similar to each other in built environment and way of living (p.78). Using the term suburb implies the

belief in the “relationship of post-war districts to a centre that is the most important place in the region” (Young, 2011, 78). Markham of course is similar to other suburbs in that it assumes a peripheral function to the success of Toronto and also functions as an urban centre and transportation hub for York Region and the GTA. This interconnected relationship that Markham shares with Toronto is evident when examining the nature of planned transit routes which function primarily as dedicated feeder routes to the City of Toronto. The city/suburb binary can be ambiguous at times when discussing planning policy in Markham since some provincially mandated policy documents encompass a standardized vision of growth through intensification for a wide range of urban centres across the province. For example, policy that was used to guide the transformation of Highway 7 is not necessarily unique to Markham, and has argued in favour of achieving greater densities along the transit corridor in order to operate a successful public transit system in the suburbs.

6.2 Transit Planning for Suburbia

Aside from sprawl placing severe negative impacts on the sustainability of cities with greater land and energy consumption being an example, researchers argue that sprawl translates into increased costs to supply transport, public infrastructure, and residential and commercial development (James, 2013, 219). Developing an effective transit system with good ridership is a top priority not only in the suburbs that are automobile-centric landscapes with low-density development, but in cities too. Krumholz states that suburban development worsened the environment for transit dependents in Cleveland, and provided fewer destinations to reach at a higher cost with longer wait times. “As cars proliferated and new development was scattered at

low densities across the region, ridership on transit declined, service was cut, and fares increased” (Krumholz, 1982, 166).

6.3 Disadvantaged in Markham

In analysing the extent to which transit planning in Markham could benefit from an equity lens, it is important to assess if a disadvantaged group exists who are unable to benefit from the Highway 7 Rapidway. If there is no clear case to justify that a segment of the population in Markham is in fact transport disadvantaged, a review could still take place to explore if there are areas of Markham that may be susceptible to being disadvantaged in future years.

When asked if it is divisive to label the transport disadvantaged. Jay Pitter, who has written on transit equity, responded by saying:

"I only think it is divisive when there is too much emphasis placed on disadvantage. What I mean by this is that labeling people as "disadvantaged" can inadvertently negate their capacity, personal accountability, resilience and insights. It can also situate disadvantaged groups as being outside of or separate from the community. However, there are numerous strategies for using an inclusive approach tethered to user experience outcomes and responsive design. Within this context I think it is absolutely useful to identify distinct disadvantaged groups. Not only is it useful, it's courageous and exemplifies professional competence."

When asked how one would go about identifying groups in Markham that are transport disadvantaged, Sean Hertel, a planning consultant, responded with:

“That is difficult, and this is not just a Markham problem. Housing stock in Markham appears to look generally the same where everyone lives where most live in relatively new homes in good shape with a driveway and garage. This image seems to convey that everyone lives in a certain amount of comfort, both socially and economically. So when you’re walking around Markham it seems that no problem exists.”

6.4 Vulnerability

Lo, Preston, Anisef, Basu, and Wang (2015) look at the changing social and economic demographics in York Region and have identified growing populations who are socially vulnerable. Figure 6.1 illustrates that over a period of 25 years, three major groups of vulnerable populations grew in York Region: recent immigrants, seniors, and low-income persons. Lo, et al's research also notes that these groups are much more concentrated in the southern portion of York Region bordering Toronto (Figure 6.2). Interestingly, 92% of all recent immigrants to York Region are

located in the municipalities of Markham, Richmond Hill, and Vaughan (Lo, Preston, Anisef, Basu, & Wang, 2015, 40). The authors hypothesize "that the low-income populations in the north are largely seniors with low incomes, whereas low incomes in the south are primarily caused by the concentration of recent immigrants..."

(p.41). According to census data, poverty is much more prominent within immigrant populations in York Region with the 2006 average household income being 70% of that of the total population (Lo, Preston, Anisef, Basu, & Wang, 2015, 48).

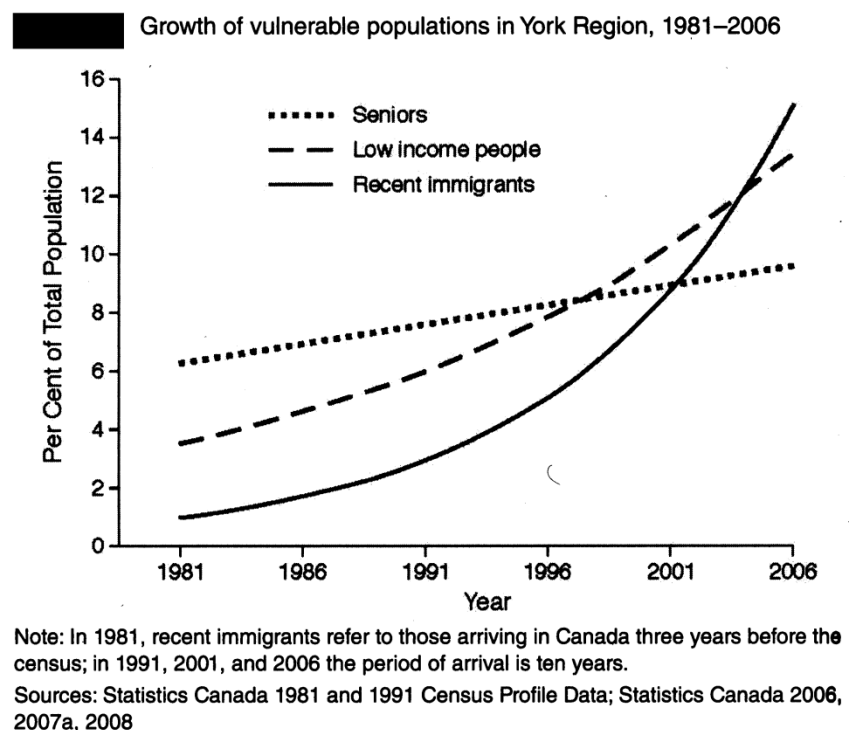
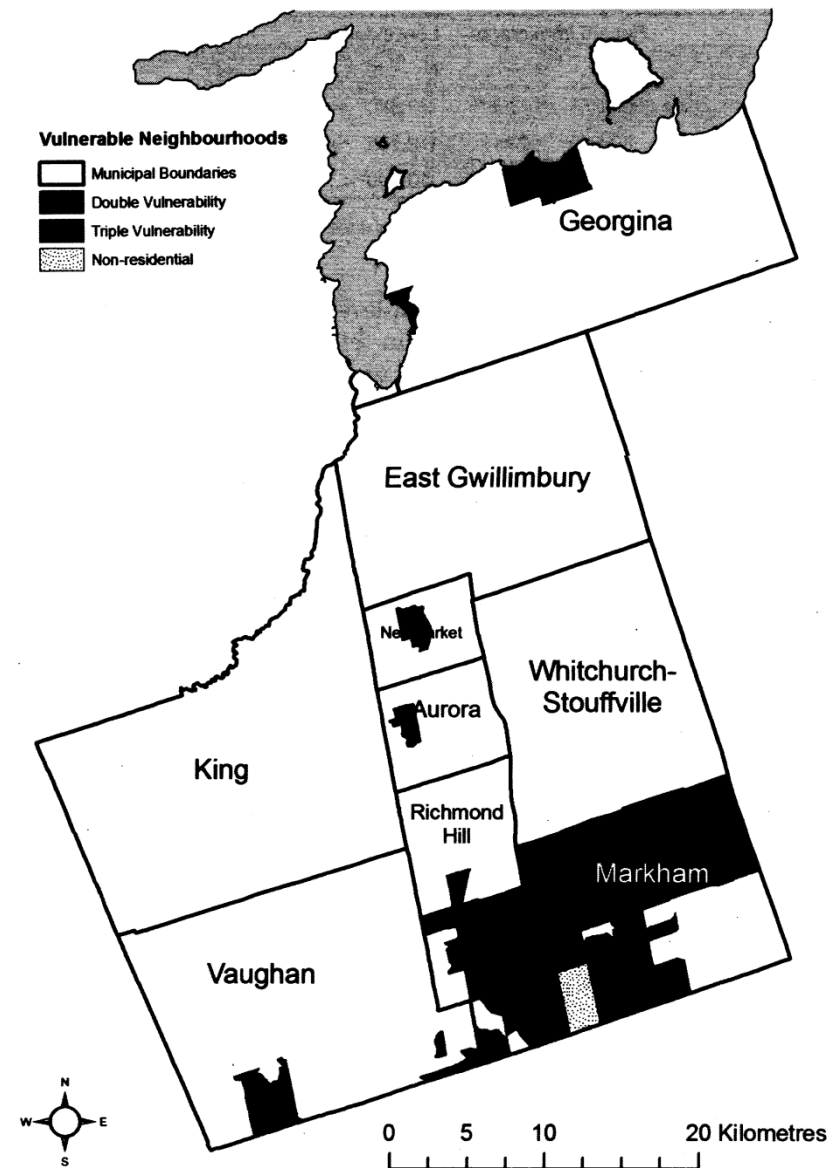


Figure 6.1 – Vulnerable populations in York Region
(Lo, Preston, Anisef, Basu, & Wang, 2015)

Figure 3.5 Vulnerable neighbourhoods in York Region, 2006



Source: Statistics Canada 2008

Figure 6.2 – Vulnerable neighbourhoods in York Region (Lo, Preston, Anisef, Basu, & Wang, 2015)

6.5 Income polarization

David Hulchanski's research titled *The Three Cities within Toronto* provided us with a strong visual perspective into the growing income polarization in Toronto forming three distinct cities.

To further this discussion while improving our understanding of the interconnected relationship Toronto shares with surrounding regions, Hulchanski and the Centre for Urban & Community Studies are in the process of completing a similar demographic study on York Region as part of the Neighbourhood Change Research Partnership. Although the research is not complete, Hulchanski has allowed some of the graphs to be used in this paper which indicate the initial findings related to socio-economic divisions that have emerged in York Region and Markham. The graphs indicate that a growing divide between high and low income earners has occurred over a period of more than three decades. However, as Hulchanski has stated “This is a national trend, not something limited to the City of Toronto. The fall (in middle-income areas) isn’t yet as dramatic in York, but if nothing changes in terms of our economy, we will see more and more low-income Census tracts” (Mendleson, 2013).

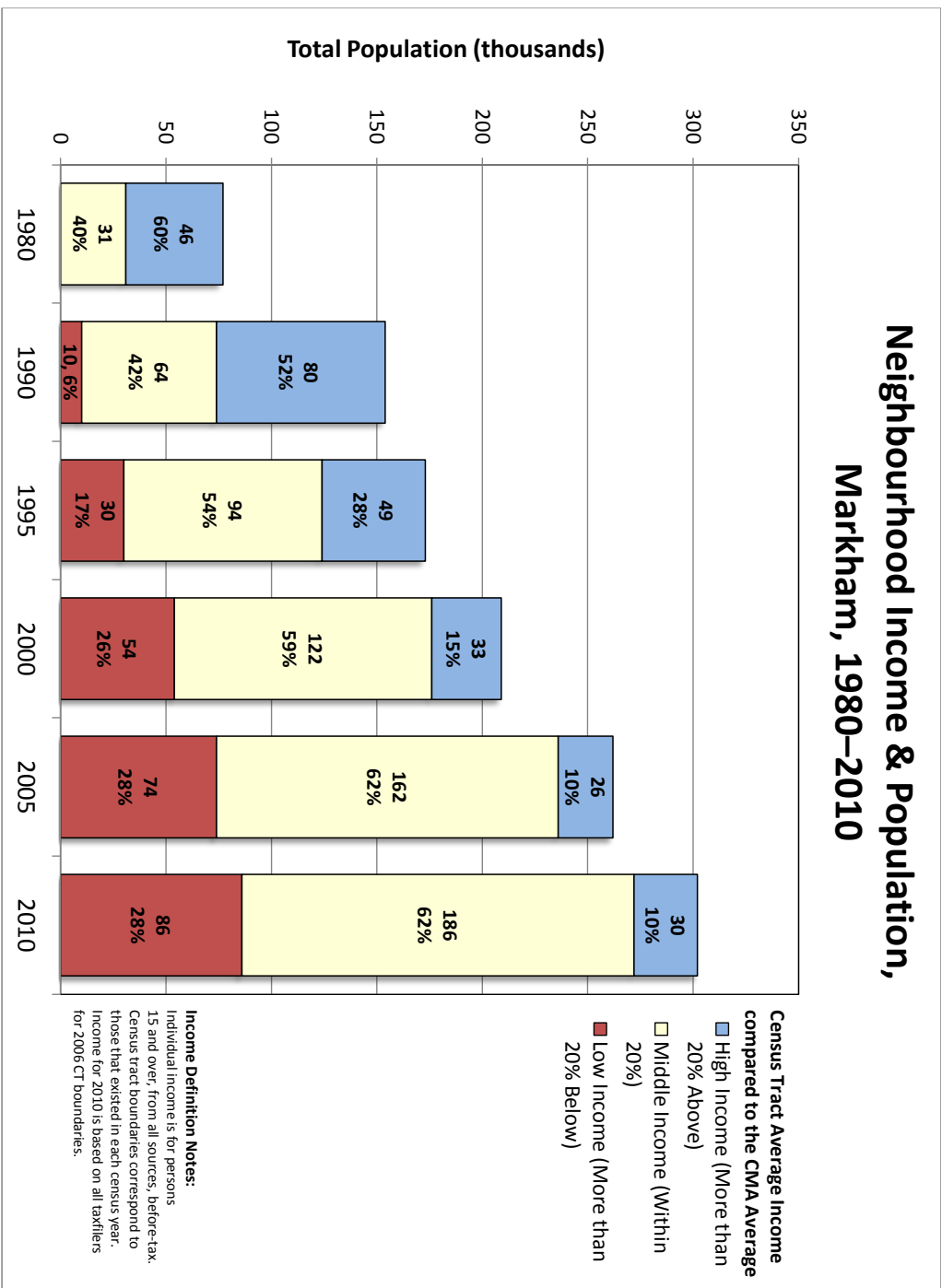


Figure 6.3 – Neighbourhood Income & Population, Markham, 1980 – 2010 (Hulchanski & Maaranen, 2015)

Neighbourhood Income Change: York Region, 2012 vs. 1980

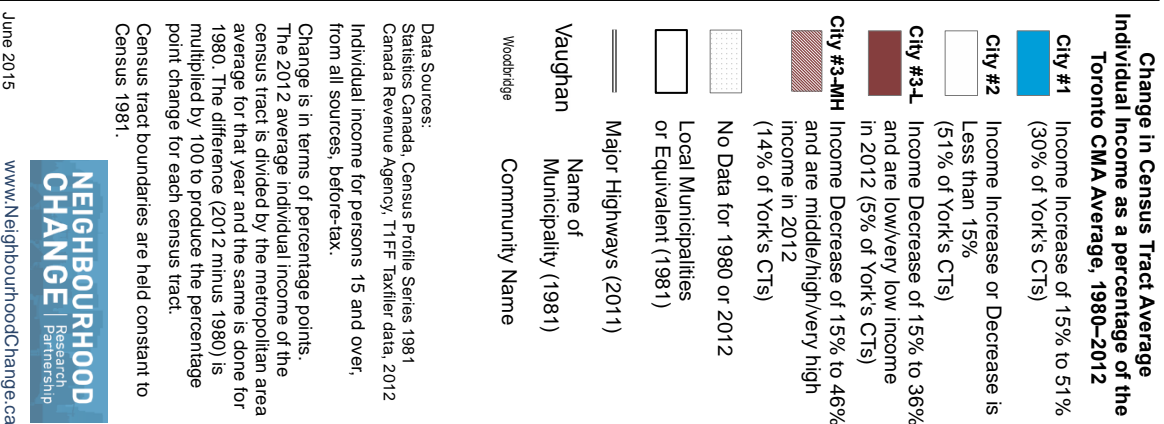
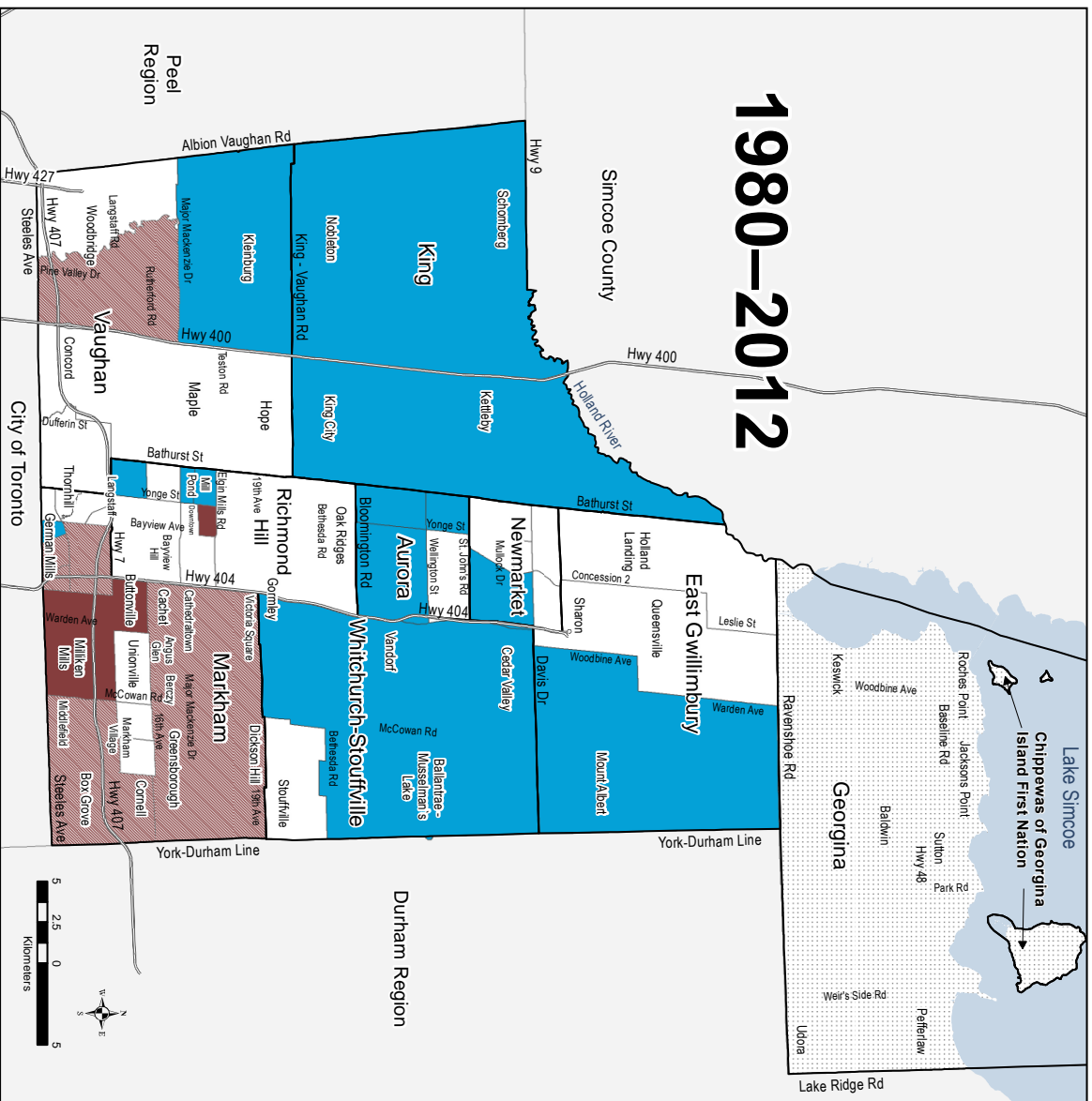


Figure 6.4 – Neighbourhood income change: York Region 2012 vs. 1980 (Hulchanski & Maaranen, 2015)

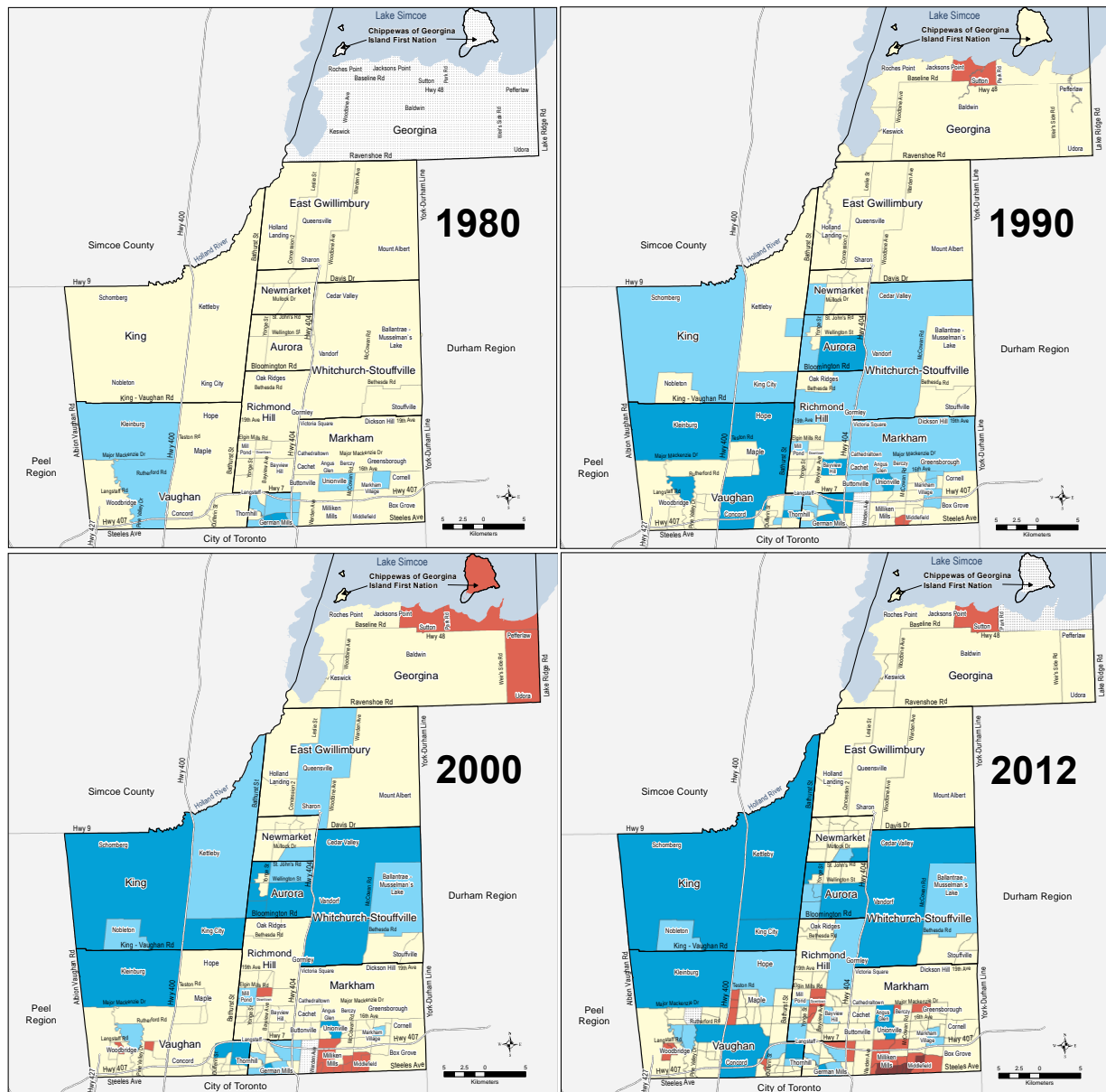


Figure 6.5 - York Region 1980, 1990, 2000, 2012 (Hulchanski & Maaranen, 2015)

Miliken Mills is an area of Markham that has been highlighted in Hulchanski's work as experiencing a decrease in annual income for more than 30 years. In the graphs above (Figure 6.5) you will notice that this particular area has experienced the most significant decline over

the last three decades. Jane Wedlock explained that this particular area has a high concentration of newcomers who experience a combination of challenges surrounding language, finding places to live, connecting to the labour market, and a lack of social infrastructure in terms of supports and services.

When asked if there are groups in Markham that are transport disadvantaged, Sean Hertel responded by saying:

“Yes I would say there are, but largely they are invisible. The image of Markham is one of affluence, and this is certainly true, but it also has a concentration of poverty. In fact, the poverty is concentrated highest in two of York Regions’ most affluent areas, Vaughan and Markham. This combined with a high degree of foreign-born residents, creates a social and economic problem and also translates to mobility challenges. Largely this issue goes unnoticed. It is persistent but not visible” (Hertel, 2015 personal interview).

6.6 Food Banks

Access to healthy food sources can be a consideration when planning transit systems. As expressed by United Way York Region, people who require access to food banks face significant challenges without transportation supports (United Way York Region, 2012, 4). “Food banks and emergency food programs are part of a bundle of coping strategies clients use when facing poverty and hunger” (Daily Bread, 2013, 22). In 2012, 52,879 people (41% of them children) in York Region were fed through eight different food banks and the number continues to rise (Traber, 2013). Daily Bread food bank noted that in the Greater Toronto Area, people who visit food banks employ a variety of other coping strategies to save money, one of them is having to walk instead of taking public transit (Daily Bread, 2013, 22). Daily Bread also noted that children in particular, are showing a greater reliance on food banks in the 905 region (Table 6.1). “This

disproportion becomes more pronounced as one moves farther away from the city core, with the 905 area having nearly twice the number of children 14 and under living in households going to food banks” (Daily Bread, 2013, 15). The Markham Food Bank, located just north of Hwy 7 and McCowan Road in Markham, serves about 400 families per month and this number continues to climb (Traber, 2013).

Children 14 and under disproportionately represented at food banks, particularly in the 905 and Inner Suburbs

	City Core	Inner Suburbs	905	Overall GTA (Survey respondents)	Overall GTA (General population)
0-14	22%	30%	37%	28%	18%
15-24	13%	15%	17%	15%	13%
25-44	27%	27%	25%	27%	29%
45-64	33%	22%	19%	26%	28%
65 and up	4%	5%	2%	4%	13%

Table 6.1 – Food bank usage (Daily Bread, 2013, 15)

6.7 Age

Issues associated with poverty place significant impact on the elderly and children. The elderly are particularly susceptible to becoming low income in York Region because they cannot easily supplement their income through work or family support and rely heavily on Old Age Security and the Canadian Pension Plan (York Region, 2015b, 4). Although seniors make up a small portion of the population in York Region, the percentage who are low income has increased from 7% in 2000 to 11% in 2012 (York Region, 2015b, 3). In accessing food banks, “[s]eniors over 65, who make up a much smaller portion of the food bank population than the general population, may be underrepresented because of greater difficulty being able to access a food

bank due to lack of mobility and/or cost of transportation” (Daily Bread, 2013, 15). Child poverty is also an issue, where trends have shown that Markham has the highest prevalence of children in poverty in the region. Child poverty rates increased from 8% in 1990 to 20% in 2005 however, a closer examination of the methodology used may reveal that there is a greater number of children in Markham than Toronto for example, drawing an uneven comparison (Childrens Aid Society, 2008, 8). Figure 6.5 shows how Markham compares to other municipalities in Ontario where child poverty is prevalent.

Child Poverty Rates 1990 & 2005 - Selected GTA Communities

(Reproduced from Children Aid Society's Report Greater Trouble in Greater Toronto: Child Poverty in the GTA, Dec 2008.)

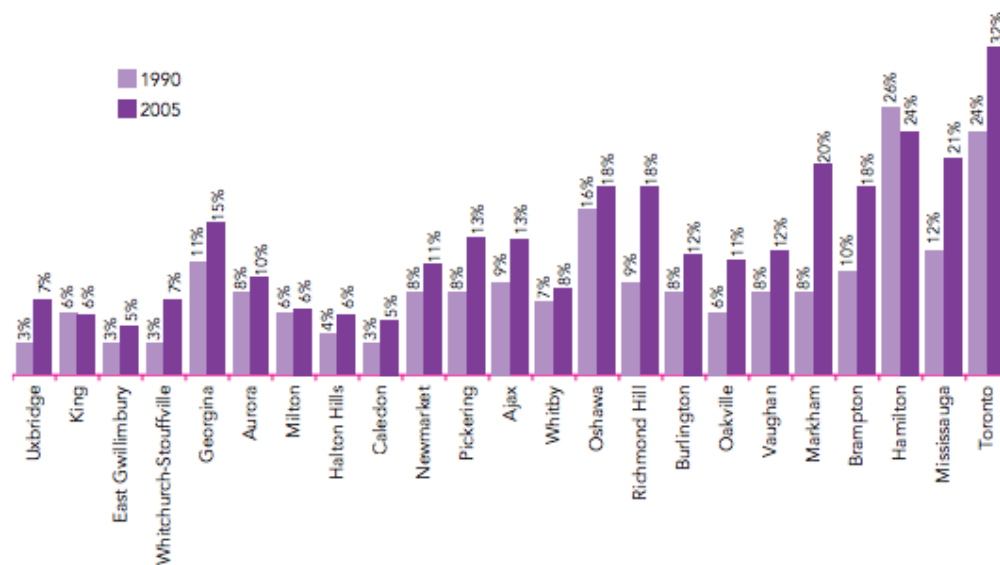


Figure 6.6 – Child poverty rates 1990 & 2005 (City of Markham, 2011a, 26)

6.8 Homelessness

Overall, Markham has a higher average household income than the national average of \$90,535 (Statistics Canada, 2011). According to Statistics Canada, the average household income in Markham is \$108,520, the median household income is \$86,022, and approximately 1 in 5

households or 21% had a household income over \$150,000 (City of Markham, 2011). Although Markham appears to be a very affluent community, the United Way York Region and research respondents claim that this may be a myth. Although affluence may be rising, poverty continues to grow making hidden poverty and homelessness issues for concern in York Region (United Way York Region, 2012). On May 1st, 2012, the United Way York Region held a focus group discussion in Milliken Mills, the area of Markham which displays a consistent depreciation of income according to Hulchanski's research. The meetings were held in several of the municipalities in York Region including Markham, to explore how the community understands growth, the social infrastructure challenges, economic vulnerability, and if there are opportunities for change. After speaking with community members it was evident that several issues needed to be addressed in Markham. Firstly, homelessness is in fact a reality in Markham and the supports are not clear because the challenges associated with homelessness (eg. Mental health issues) are not clear. "People are living in basement apartments with very poor quality of life" (United Way York Region, 2012). Community members agreed that more focus should be placed on intervention after a housing crisis, general prevention, helping people to know their rights, and targeting housing problems before they become critical.

When asked if homelessness was an issue in Markham, Jane Wedlock responded by saying "there is absolute homelessness in Markham but we (United Way) do not have a scope or scale of it." Wedlock mentioned that this will perhaps change in January 2016 when a first-point-in-time count will take place in York Region that is focussed on the absolute and chronically homeless. "There is a lot of hidden issues across the Region surrounding

homelessness, and in Markham you will have multiple families living in dwellings, illegal rooming houses, and shared accommodations as a result of lack of regulation, affordability, and improper housing to house the homeless.”

Census data also illustrate that low income rates vary between local municipalities.

Figure 6.7 indicates that York Region did have lower low income rates than the national, provincial and Toronto average however, Figure 6.8 indicates that Markham and Richmond Hill had the highest rates of low income for York Region. The majority of low income residents or 84%, who live in York Region live in the three southern municipalities: Markham, Richmond Hill, and Vaughan (York Region, 2015b, 7). Although income polarisation appears to be an increasing issue, York Region suggests that they have “mostly avoided high levels of concentrated low income at the community level and most residents living with low income are generally integrated into mixed income communities” (York Region, 2015b, 7).

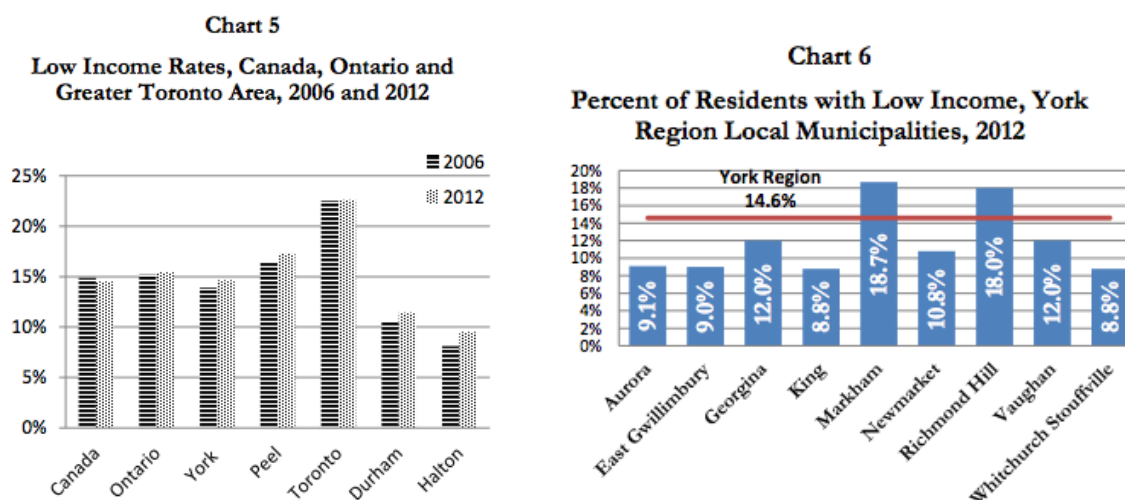


Figure 6.7 & 6.8 (York Region, 2015b, 7)

6.9 New immigrants & visible minorities

According to Statistics Canada National Household Survey, 72.3% of the Markham population is a visible minority making Markham “Canada’s most diverse community” according to the Toronto Star (Statistics Canada, 2011), (Black, 2013). The majority of this population comes from China and South Asia with 38% of the total population of Markham being from China, 19% from South Asia, and approximately three-quarters or 77% of all immigrants of the total population being born in Asia (City of Markham, 2011).

Additionally, 32% of the population indicated their mother tongue to be a language originating from China:

Mandarin, Cantonese, and/or Chinese (not specified) (City of Markham, 2011). A large portion of growth in York Region is the result of immigration. In the 1990s, immigration accounted for 42% of York Region’s growth however, providing settlement services has been a challenge because of declining provincial and federal funding and as a result of low density and dispersed development patterns (Lo, 2011, 145).

Barriers can and do exist for non-English speaking residents to access public transit. In fact, one of the challenges for youth highlighted by the United Way York Region, is for Chinese speakers to obtain English proficiency to find employment, supporting their transition to independence (United Way York Region, 2012). Public transit is directly linked to finding

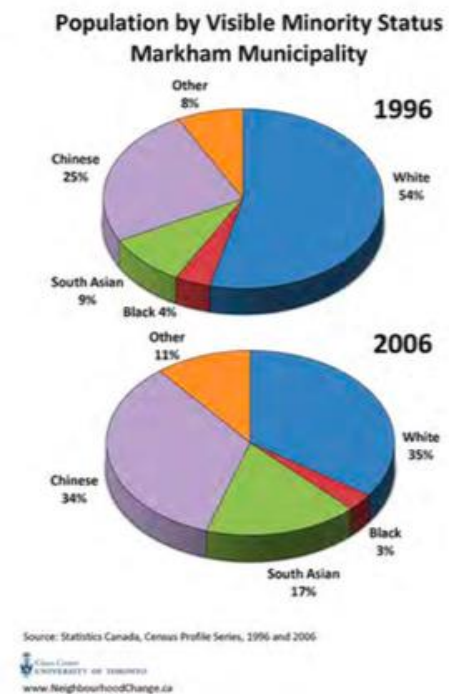


Figure 6.9 – Population by visible minority status (Hulchanski & Maaranen, 2015, 58)

meaningful employment, and language exists as a barrier to access both. Additionally, new immigrants are more likely to rely on food banks in the 905 region (Table 6.2).

New immigrants disproportionately represented at food banks, particularly in the Inner Suburbs

	City Core	Inner Suburbs	905	Overall GTA (Survey respondents)	Overall GTA (General population)
Born outside Canada	45%	60%	36%	50%	51%
In Canada 5 years or less	28%	38%	29%	33%	17%

Table 6.2 – Percentage of new immigrants (Daily Bread, 2013, 15)

6.10 Media

From a survey of vivaNext advertising and media, there seems to be a strong non-Asian representation in the majority of photographs used. There are non-white models in some of the photos, however considering the demographic data above, there is a misrepresentation. The photos also depict the lifestyles of two-parent families, postsecondary students, shoppers, and business professionals, the choice riders. Not atypical of Viva specifically, but one can also note a lack of same-sex couples, single parent families, elderly persons, and persons with visible disabilities.

“In the suburban context, there is a feeling that life is good and that you’ve made it. You have a home, a car, and a certain level of mobility. It was realized that Viva had to compete with that. They had to come up with a counter image and counter lifestyle aspiration that is compelling enough to have people associate transit with not being counter to the suburban lifestyle. If you look at all of Viva’s marketing, they are advertising this lifestyle. Does this lifestyle branding exclude certain groups? For

example, a single mother with kids who has a great distance to travel. It does not exclude deliberately, but the consequence would be that certain people are left out of that vision. Viva aims to serve a core demographic of more affluent, professional-type persons” (Hertel, 2015 personal interview).



Figures 6.10 & 6.11 – Media screenshots (vivaNext, 2015)

When asked if he thinks it is fair that transit providers target “choice riders” in an effort to combat congestion and create a modal shift (Eg. those who drive and can afford to pay increasing fares), Professor Barrieau responded by saying:

“One of the issues with transit is who is it marketed too? There are different types of markets in public transit. There are people that cannot afford a car, people that cannot drive because they are too young or too old, they have suspended licenses, or they have a disability that impairs their driving ability. You have this market of people who do not have a choice, they have to take transit. A great majority of these groups are poorer populations. This means that fares are a very important aspect. These groups are not necessarily doing the typical suburb to downtown commute as well. They are accessing nearby neighbourhoods, health facilities etc. In the suburbs, choice riders (largely drivers) have choices so in retrospect they are difficult to target. If the goal is to ease congestion, then drivers need to take transit and therefore transit needs to be competitive and provide comfort for these choice groups. Providing ‘comfortable’ infrastructure means asking is the transit reliable, is it flexible, is it close to my home, are there a small number of connections before my destination, and will there be a seat when I get on the bus?” (Barrieau, 2015 personal interview).

6.11 Suburban growth in York Region

The data used in my research shows that the gap between winners and losers is clearly growing in York Region. This trend, according to Ryerson University Professor Mitchell Kosny, presents challenges as a result of development conditions, NIMBYism (or “not in my backyard”), and weak political will. Kosny argues that the Region did not grow with the needs of low-income residents in mind. He states “It’s not like planners and politicians in York Region are bad guys. It’s just that all those municipalities were set up, saying, ‘Come here, because we don’t have those issues here.’ They’re facing issues that they didn’t anticipate facing 20 or 30 years ago” (as quoted in Mendleson, 2013).

As a result of large amounts of funding being borrowed for infrastructure, York Region has accumulated the highest amount of debt of any region in the GTA (Javed, 2015b). In 2015, York Regions’ debt has reached \$2.54 billion with an expected peak at \$3.7 billion by 2020 (Javed, 2015b). According to York Region, “[d]ebt is necessary because infrastructure has to be built ahead of growth” (Hughes & Hankins, 2015). The debt was expected to be paid off once

development charges and levies were obtained, however, development charge collection can be volatile depending on the present-day economic climate (Javed, 2015b). Development charges assist with the cost of borrowed money used to build infrastructure such as water and sewage pipes (Javed, 2015b). “For years, the region’s debt repayment plan has been dependent on development charges from current and future construction of homes in booming cities such as Markham, Vaughan and Richmond Hill. But the plan isn’t working quite as expected” (Javed, 2015b).

According to York Region CAO Bruce Macgregor and Treasurer Bill Hughes, York Region pays a considerably larger amount for certain types of infrastructure because it is geographically larger than other regions, and water/sewage infrastructure for example, used to be largely subsidized by the province and also needs to travel greater distances that are costly (Queen, 2015b). The growth in York Region has not occurred as rapidly as expected especially during the 2008-09 recession however, Edward Hankins, director of the Treasury Office for York Region remains optimistic. Hankins predicted that “York is going to grow. It’s one of the fastest growing municipalities in Canada. It’s just a question of how quickly it will grow” (Javed, 2015b). The reliance on single family residential development charges is an obvious incubator for more sprawl in the future since they generate more revenue when compared to high-rise development. “A single or semi-detached home brings in \$41,059 in development charges. A condo of less than 650 square feet brings in almost \$17,466” (Javed, 2015b). York Region expects an increase of 1.5 million people in the next two decades, and “expects to add 229,300 housing units over that period, almost 40 per cent of those single-family homes - the most lucrative type when it comes to development fees” (Javed, 2015b).

6.12 Making a connection to transit

While referencing reports that review the state of transit disadvantaged groups, there is a common link made by researchers and advocates which emphasizes the importance of public transit in bridging socio-economic gaps. Jane Wedlock of York Region United Way stated that “[p]ublic transit is what allows people to be included in our communities, participate civically, access employment, and to move around. When emphasizing terms like sustainability, we should also highlight affordability and accessibility when discussing transit.” Danielle Zanotti, CEO of York Region United Way, says that many low-income residents tend to cluster in areas such as southern Markham because of the transit services that exist. Alternatively, Zanotti states that “[i]f you’re up in Georgina, poor, with a transit system that is still growing and young, you’re stuck” (Mendleson, 2013). From Wedlock’s experience, she feels Georgina is the most transport disadvantaged community in York Region.

I asked one of the lead engineers on the Rapidway project if he knew of any transport disadvantaged groups in the area or if there were groups who he felt would not be able to fully utilize the transit network on the Highway 7 corridor. He responded by saying:

“No I don’t think so. Overall York Region has a very high car ownership, has high average income, generally a fairly well-off area. When we planned the transit network, we planned it to connect to what we know are major destinations. So for example when Viva was implemented, instead of staying on Highway 7 in the Vaughan area, we knew that York University was a huge draw for transit riders. The current routing for Viva actually goes down Keele (Street) into York University and back up Jane Street again. That was done on purpose because of that draw. Now when that gets replaced by the Spadina subway extension, and we remain on Highway 7, we are still serving York University by rapid transit. The main factor in planning for these corridors is locating where the density will go, and planners point us to the four regional centres and along the connecting corridors. This is why we planned it here rather than identifying maybe pockets of lower income” (2015 personal interview)

In addition to this, I asked the engineer if he gets a sense from planners that they see large scale transportation projects like the Rapidway as a way to spark development. He responded by saying “Absolutely, yes. It is an essential part of the plan.”

6.13 Discussion

What is evident in the review of vulnerable and potentially transport disadvantaged groups in Markham and York Region is that the issues seem to be hidden. There is an apparent illusion that these groups exist at a minimal scale due to the dominating view of prosperity in Markham and in the region as a whole. The region has accumulated a worrying amount of debt for the provision of infrastructure, and as seen from the data presented, many of the issues surrounding social vulnerability are worsening as time passes. Present-day structures are deteriorating conditions for underserved groups. Therefore, understanding policy which has guided growth, development, and transit on the Highway 7 corridor is crucial in understanding current planning frameworks.

Chapter 7 - Policy & Planning

As Fowler and Siegel (2002) note, there are various ways in which government and decision-making may be studied. One could consider the politics of local government (eg. voter turnout, candidate recruitment, party politics), the legislative framework and mandate of local government (limits on municipal authority), relationships with provincial governments, tiered governance structures, or internal administrative organization (eg. The role of the mayor and chief administrative officer). In this paper, however, my focus is an examination of the policies that directly link to the transformation of Highway 7 and the Rapidway, and were produced by local and provincial government (Fowler & Siegel, 2002, 1). Rather than focussing on specific decision-makers and political elites, I examine policy as a reflection of the decisions made to implement the Rapidway project. “Policies are also important because they define how local governments interact with their citizens. As far as citizens are concerned, the policies local government adopts are the ‘face’ of local government” (Fowler & Siegel, 2002, 1).

7.1 Planning and policy background for the Rapidway

Highway 7 was first identified as a potential rapid transit corridor in the first Regional Official Plan for York Region in 1994. In this document, the stated intention was “[t]o develop, at an early date, four Regional Rapid Transit Corridors...linking the Regional Centres, and linking the Region with the City of Toronto and neighbouring regions” (York Region, 1994). Markham Centre is listed as one of 17 urban centres under the Places to Grow strategy for the Greater Golden Horseshoe identified in Schedule 4 of the Growth Plan for the Greater Golden Horseshoe, 2006 (Government of Ontario, 2006). The Growth Plan for the Greater Golden

Horseshoe articulates this regional vision and goals as set out by the province of Ontario's Places to Grow Act. The Growth Plan is fundamental in determining where growth takes place and what the urban form should look like. Public transit is an important component of these growth policies, and the vivaNext plan takes direction from the vision outlined by the Places to Grow Act (vivaNext, 2010).

In Section 7 of the Markham Official Plan 2014: "Transportation Services, and Utilities", it outlines the overall structure and role of transportation in relation to land use. The plan supports "more balanced mobility" with improved connectivity between transport modes (eg. Transit, walking, and cycling), and a "transition from a primarily auto dependent community to one where travel includes a greater share of other modes such as walking, cycling, transit and carpooling" (City of Markham, 2014a). From an equity perspective, the overall objective of the section attracts attention: "...to develop a transportation system that increases mobility options for all users, including pedestrians, cyclists and transit riders and, in the process, begins to redress the past imbalance on accommodating the automobile" (City of Markham, 2014a). Although not heavily elaborated on, here we can see mention of transit used to facilitate a wide spectrum of users. This represents a focus on creating a modal shift however, it can also be considered a first step to increasing mobility for disadvantaged users. Clearly, one of the key roles of transportation policy in Markham is to create attractive alternatives to car travel, "particularly the journey to work" (City of Markham, 2014a). This will be done in relation to policies regarding growth, development, and urban form. The Official Plan emphasizes that

growth should be concentrated in intensification areas “to ensure that an acceptable balance between travel demand and transportation capacity is maintained” (City of Markham, 2014a).

The Rapidway is a fundamental piece accompanying the infill development taking place in Markham Centre. As seen in Figure 7.1, four main corridors were identified in the Region’s 2002 Centres and Corridors Strategy that will be served by the vivaNext Rapidway. “The Region’s 2002 Centres and Corridors Strategy called ‘Making it Happen’ and the 2005 launch of viva bus rapid transit started to make the network of Centres and Corridors a reality” (York Region, 2014b). The 2004 Regional Official Plan strengthened growth policies in the four growth centres allowing intensification alongside a rapid transit strategy - vivaNext. The initial phases of rapid transit services have been directed to the following urban centres: Vaughan Metropolitan Centre, Richmond Hill/Langstaff Gateway, Markham Centre and Newmarket Centre (York Region, 2014b). These centres and corridors are being developed into destinations with mixed use development using principles of smart growth, a growth management practice which aims to achieve more sustainable, compact development in an effort to combat suburban sprawl and automobile-centric environments (City of Markham, 2014b). The plan for Markham Centre is largely based on this idea of a more compact city. Markham notes that policies set around smart growth aim to provide a “variety of transportation choices to encourage transit and reduce auto-dependency” leading to a clean and healthy environment (City of Markham, 2014b).

CENTRES and CORRIDORS

Schematic Diagram

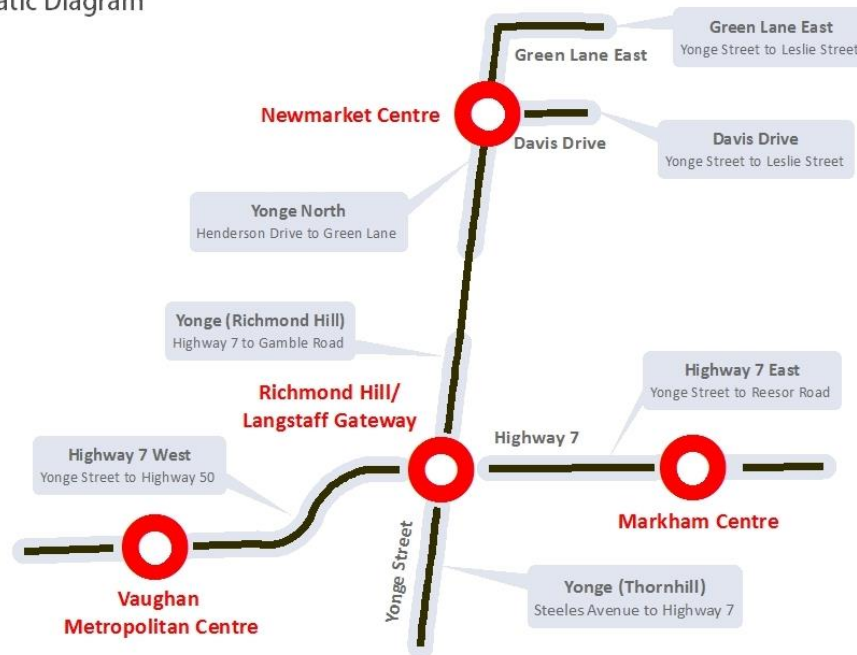


Figure 7.1 – Centres and Corridors Diagram (York Region, 2014b)

7.2 Growth factor

The regional centres are “the Region’s downtowns...served by efficient, convenient rapid transit” (York Region, 2014b). Markham Centre is the best example of growth and development that has been undertaken in Markham in conjunction with the Rapidway. The plan for Markham Centre or a “Town Centre” at Highway 7 and Warden Avenue was mentioned as early as in the 1987 Town of Markham Official Plan Review. The plan encourages “a greater variety of uses and high quality of development suitable for a Town Centre” on vacant land at Warden and Highway 7” (Town of Markham, 1986, 13).

The York Region Vision 2051 is a blueprint for York Region's future, guiding Regional Council and staff decisions for strategies to be achieved by year 2051. Vision 2051 elaborates on focussing intensification on corridors and centres in an effort to provide "a place for everyone by ensuring an inclusive, safe, integrated and welcoming community" (p.16). The Vision also mentions "enhancing mobility within Regional Centres and Corridors through higher order transit systems, including subways and rapid transit" (York Region, 2013, 16). Markham Mayor Scarpitti noted that in order to achieve certain proposed densities, transit infrastructure is critical. "If you intensify without transit you are magnifying the bad effects seen by sprawl." In referencing the Rapidway, Scarpitti stated that "without these investments in Rapid Transit, we cannot direct growth into urban centres" (Scarpitti, 2015).

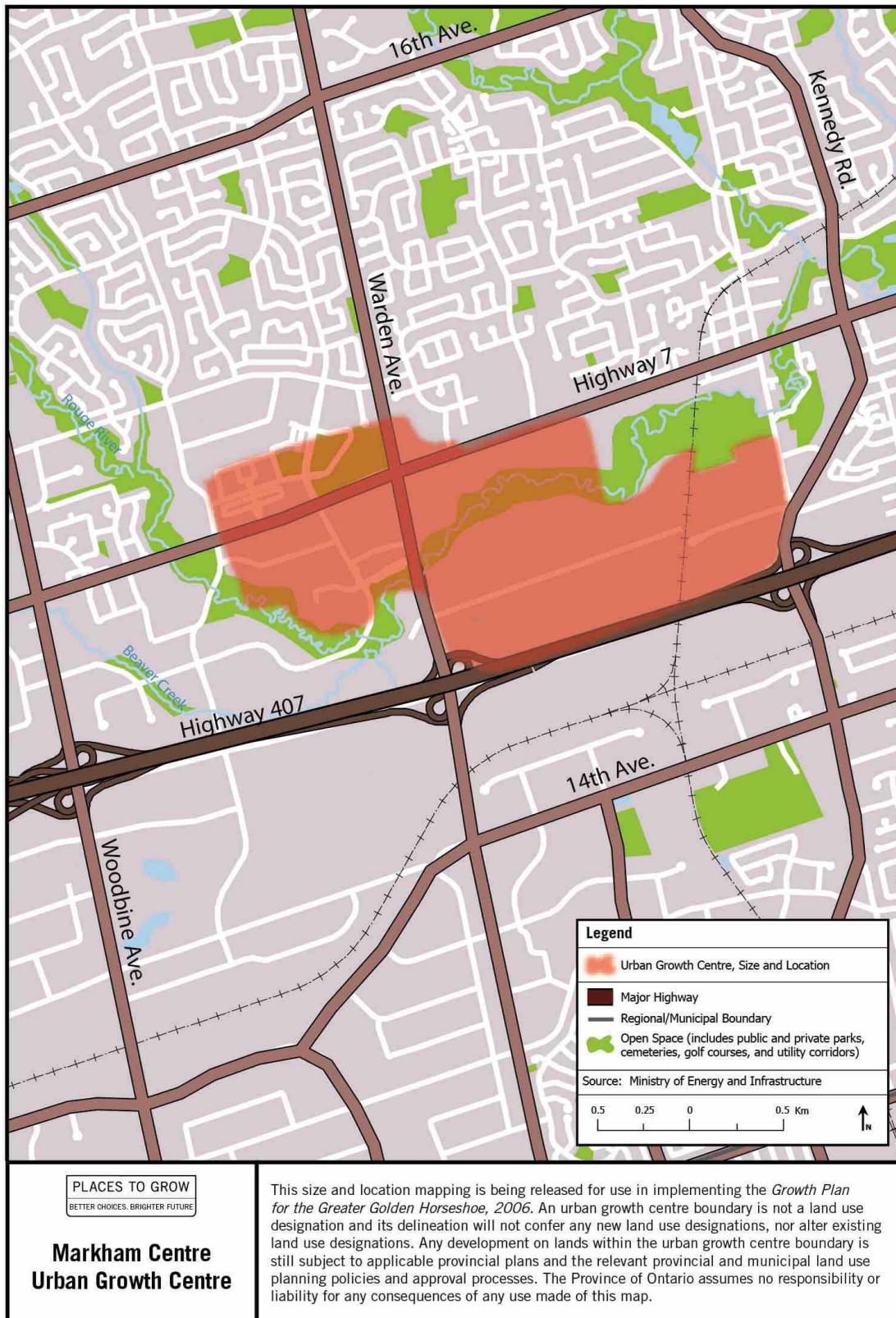


Figure 7.2 – Markham Centre, Places to Grow (Government of Ontario, 2006)

The first of York Region's Principles for Intensification, which were adopted as part of the Regional Official Plan Review was to "[c]onnect the Regional Centres and Regional Corridors with rapid transit systems to stimulate compact and efficient growth" (York Region, 2009b, 9). The Region's 2002 Centres and Corridors Strategy has provided direction in policy for the Markham Centre Plan, reflecting a general framework for corridors in the Region with a strong focus on development and design, "(to) create a clear, high density, mixed use graphic vision for the Region's centres and corridors" (York Region, 2002). The region has provided "strong planning guidance" in order to achieve certain density targets, urban design and streetscaping performance standards. The promotion of concentrated development in corridors and centres is the recipe for supporting the financial viability of the York Region Rapid Transit initiative according to the Region (York Region, 2002).

7.3 York Region Transportation Master Plan

The Transportation Master Plan (TMP) lays out the long-term vision, policies, programs, and decision-making framework for transportation projects in York Region until 2031, including the Viva Rapidway (York Region, 2009a, 1). Completed in 2002, the TMP targeted increasing traffic congestion in York Region and recommended greater public transit use as one way to alleviate the problem (Ng, May, & Popik, 2014, 3). It is one of the foundational documents to leverage the implementation of the vivaNext Rapidway project. The plan "identified the top priority was to implement rapid transit services to connect the municipal centres in the urban cores of the Region" (Ng, May, & Popik, 2014, 3).

As stated in the TMP, York Region Rapid Transit Corporation is responsible for planning, design and, construction of the rapid transit network and related infrastructure, for the pursuit of joint development opportunities, and for the strategic oversight of Viva operations to deliver on the transit priorities (YRRTC, 2014, 13). From an equity perspective it is interesting to point out two key definitions of sustainability within the TMP as developed by the Canadian Centre for Sustainable Transportation. The first defining point: “[a]llows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations” (p.2). In addition, transportation “[i]s affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy” (York Region, 2009a, 2). Although equity and affordability are mentioned and are fundamental in determining access for disadvantaged groups, the TMP does not explicitly state how these objectives are to be attained. However, it is a good step in demanding further action for disadvantaged groups.

7.4 Metrolinx Big Move

The vivaNext project has been implemented and funded by Metrolinx, a crown agency of the Government of Ontario, under their Big Move plan (vivaNext, 2014), (Ng, May & Popik, 2014, 4). Metrolinx was first established in 2006 as the Greater Toronto Transportation Authority (GTTA) under the Greater Toronto Transportation Authority Act and in 2007 became known as Metrolinx (Metrolinx, 2008a). Metrolinx’s “Big Move” was introduced as a regional transportation plan and was adopted in 2008 by the Metrolinx Board. The plan introduced a new way of moving throughout the GTHA (Greater Toronto and Hamilton Area, which includes

York Region) using public transit. The plan is tied directly to the Growth Plan for the Greater Golden Horseshoe where policy is directed at curbing automobile-centric sprawled landscapes “by mandating the development of mixed-use, transit-supportive, cycling- and pedestrian-friendly communities” (Metrolinx, 2008a, 5).

Under the Big Move’s 25-year plan, the VIVA Highway 7 corridor is listed as one of the “Top Transit Priorities Within the First 15 Years” since the inception of the document (Metrolinx, 2008a, 60). As mentioned, the Growth Plan identifies 17 urban growth centres in the GTHA where future development is expected to take place. The Big Move plan aims to connect these growth centres with one another in York Region where “existing VIVA services will be upgraded to rapid transit to create an east-west spine on Highway 7” (Metrolinx, 2008a, 62). Of course, Viva rapid transit is not only meant to be an accelerator of development but also a tool for combating congestion (Figure 7.3). “Most communities at the periphery of the GTHA are entirely dependent on driving for getting around. The RTP will extend rapid transit service to more of these communities, giving them a viable alternative to driving or opportunities to shorten their auto trips, taking more cars off our congested highways” (Metrolinx, 2008a, 64). From an equity perspective, it is important to note the first goal and objective listed in Metrolinx’s Big Move as “Transportation Choices; People will have a wide range of options available to them for getting around regardless of age, means or ability, including walking, cycling, public transit and automobiles” (Metrolinx, 2008a, 15). Manaugh, Badami, El-Geneidy (2015) note that this is a “worthy goal and objective” as it potentially targets disadvantaged groups (p.170). This is specifically true in the second objective which aims for “[i]mproved accessibility for seniors, children and individuals with special needs and at all income levels”

(Metrolinx, 2008a, 15). Although, this language is useful in our discussion of equity, there is no clear metric used to assess this objective (Manaugh, Badami, El-Geneidy, 2015, 170).

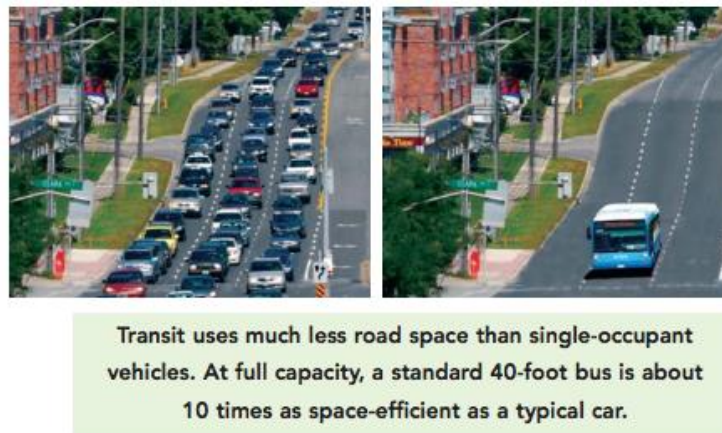


Figure 7.3 – Image from Big Move (Metrolinx, 2008, 7)

7.5 Metrolinx Viva Benefits Case

For major transit infrastructure projects, Metrolinx uses a cost-benefit analysis scheme to determine the potential economic benefits of each project. The Viva Benefits Case was conceived in November 2008 and was used to provide decision-makers with several feasibility options for future implementation of the Rapidway (Metrolinx, 2008b, 1). The analysis uses a “Multiple Account Evaluation” or MAE methodology which “compares the benefits accruing to people and communities, the broader economy and environment against the cost of building and operating the project ...” (Metrolinx, 2008b, 10). For the Rapidway project, the MAE framework looks at the financial, environmental, socio-community, and other economic impacts, as well as the transportation user benefits (p.10). Transportation user benefits include travel time savings for transit and road users, automobile operating cost savings, safety benefits

(reduced accidents as a result of reduced congestion), and frequency of service (as a result of segregated bus lanes, and other qualitative benefits) (Metrolinx, 2008b, 12). Some qualitative benefits that stand out are "reduced negative aspects often associated with buses" as a result of "a state-of-the-art bus system" which will enhance the appeal to users (Metrolinx, 2008b, 12). "Stations will be more like light rail stations, covered and offering protection from the elements for waiting passengers and built to very high standards. New, state-of-the-art buses will be equipped with internet capabilities to appeal to the business professional commuter" (Metrolinx, 2008b, 12). These points highlight the need to promote rapid transit as a premium service in order to attract choice riders. In terms of specific "Social Community Impacts", the benefits case only refers to land use impacts (transit as a catalyst for compact development encouraging walking and cycling), health impacts (again, as a result of new mode choices in the form of walking and cycling), and traffic and community impacts (the maintaining of existing traffic capacity, and improved streetscapes) (Metrolinx, 2008b, 25).

After determining a value for these user benefits, they are weighed against the incremental costs of building and operating the system using a benefit-cost ratio or B/C (Metrolinx, 2008b, 13). The two options proposed for the Rapidway (either a full build-out of the project or phased approach) both result in a negative net present value, meaning the incremental costs exceed the transportation user benefits (p.13). In their review of Metrolinx's Big Move, the Neptis Foundation deemed the benefit-cost case for the Rapidway as "not quite so strong" and that "[w]ith appropriate policies, the benefits of these schemes would likely outweigh the costs" (Neptis Foundation, 2013, 82). This is an assessment of Metrolinx's "fixed metric" model which assumes no changes to land use and employment as a result of transport

policies and investment related to the project. Neptis Foundation suggest Metrolinx use a more “dynamic’ model, assuming substantial but plausible changes to employment patterns due to the schemes” (p.82). It should be noted that Neptis’ review does not consider “social benefits (such as safety or equity) or environmental benefits (such as reduced air pollution or increased energy conservation)” which Neptis admits “often go unpriced in transportation forecasts.” Although social and environmental benefits are important, Neptis notes that “they are seldom the deciding factors in scheme selection” (Neptis Foundation, 2013, 25).

7.6 Political economy

As Stone (1995) indicates, Urban Regime theory acknowledges that public policies are shaped by a variety of actors, coalitions, and resources and that both local government and business both bring different resources and capacities needed to govern (Mossberger & Stoker, 2001, 812). Regime Theory also, “acknowledges the way that the socioeconomic environment frames the options open to the governing coalition and how federal grants or state-level politics are necessary to make certain options feasible” (p.66). The challenge of this theory as Stoker notes, is “to connect local and non-local sources of policy change” (Stoker, 1995, 66). Regional and provincial government provide regimes in Markham the necessary financial resources and policy framework required to guide growth and for implementing the Rapidway. The view that transportation functions primarily “to maximize the capacity to move people to meet the imperatives of production and reproduction,” is quite apparent in not only Markham but the modern capitalist city as well (Kipfer, 2012).

What is prevalent in normative planning policy is growth and economic competitiveness. In addition, when we discuss transportation planning policy specifically, certain narratives are more common than others. As mentioned, these imperatives are tied directly to capitalist ideals which aim to maximize production and reproduction, and to favour “winners” or “choice riders” (Kipfer, 2012). Bachelor (1993) and Jones (1993) argue that “certain policy ideas become so dominant that urban regimes become locked into that way of seeing the world.” In addition, urban regimes “codify solutions and problem definitions into a solution-set that tends to dominate policy-making for a period of time” (as cited in Stoker, 1995, 67).

7.7 Discussion

Throughout the policy observed related to transportation and land use, there are distinct commonalities in the goals and objectives, but little or no mention of improving mobility for underserved populations. These commonalities in directives can be compared as far back as in the 1976 Town of Markham Official Plan. As Keil and Young (2011) state, “[m]ost infrastructure decisions are made for the connection of prime network spaces in the downtowns to major transportation and communication hubs in the region” (p.9). There exists a difficulty in balancing growth and revenue-centric models of transit and land use with a vision of improved equity and accessibility for those who depend on transit the most. Additionally, the accommodation of certain choice riders is clear in policy where much of the focus lies on creating a modal shift from automobile to transit user.

York Region as mentioned, is three times the geographic area of the City of Toronto, and therefore providing transit to the far reaching corners of the region is costly especially with low ridership in certain areas. As Mees (2010) argues, BRT, although offering a lower-cost alternative to light rail, “does not offer a way around the fundamental constraints of public transport, especially in low-density, high-income cities where demand is thin” (p.27). Viva has invested in east-west service with the Rapidway on Highway 7 and on Davis Drive in Newmarket but providing transit service to municipalities like Whitchurch-Stouffville and Georgina has proven to be expensive. Low density suburbs exacerbate problems associated with transit access and ridership. Mandating compact, dense, and mixed-use communities, while progressive, is still not enough to provide greater transit access for groups with mobility needs. The guiding principles used in policy documents ensure continuous economic growth but tend to be too broad in scope. They lack rigidity in ensuring that precarious groups are firstly identified, but considered in long-term plans. Not identifying specifically which groups in the community are socially vulnerable or transport disadvantaged in Markham is problematic. There needs to be stronger language in policy which deliberately focuses in on disadvantaged groups to at minimum to create more awareness of the socioeconomic conditions that exist.

When asked if using transit as a catalyst for development and growth, and an alleviator of congestion is a valid argument, Jay Pitter stated:

“Given the amount of time that we have to live with transit infrastructure, and the investments made, I think it’s very important to never have a single imperative. I think that what we need to do is to develop what I would call a more comprehensive or holistic transit, and develop a framework which includes a number of social, economic, and infrastructure indicators because these situations are different between communities. If you have that framework that is clear enough and unapologetic about its desire to be inclusive, but also flexible enough for people to use across different situations.” (Pitter 2015, personal interview).

Chapter 8 - Solutions and barriers to overcome

As stated earlier, an equity approach would require every transit system to be uniquely designed to cater to local conditions and to residents who require assistance accessing the system. The local conditions of Markham have been identified to some degree however, more work can still be done to gain a more accurate interpretation of these disadvantaged groups. Similar to the work of Krumholz, planning and policy needs to be redefined in the best way to present the clear and changing demographic landscape in Markham and York Region in a way that would most benefit the underserved groups. Demographic data on disadvantaged groups firstly needs to be improved to understand people's travel demands, and can be used more systematically in policy to make equitable decisions within transit planning (Litman, 2014, 34). In attempting to achieve fairness in accessing transit and greater equity, planners need to concern themselves with the barriers that exist presently. Just because the Rapidway offers a faster service and new design for the community, does not mean that the benefits are distributed justly and fairly.

Equal access to transit services (equality), is not enough since it assumes that everyone has the same ability to access transit. "Equity is particularly important when we recognize that equality is often an illusion because some populations face substantial barriers to accessing their 'equal' rights" (Gaspar & Ogbu, 2015). Vertical equity (Litman, 2014), (Foth, Manaugh, & El-Geneidy, 2013) should be a primary consideration whereby groups that are transport disadvantaged with regard to income and social class are specifically targeted within policy.

8.1 How premium is too premium?

Leap Transit in San Francisco, California is an example of how premium a transit service can really become. Since Markham is considered the tech hub of the region or Silicon Valley of the North, Leap is an interesting example to use because it was propelled largely by the tech sector from Silicon Valley in an attempt to revolutionize urban transportation. It was conceived as a start-up business, and although it failed in only a few months, the company



Figure 8.1 – Leap Transit bus interior (Manjoo, 2015)

raised \$2.5 from investors and charged \$6 per ride (Manjoo, 2015). What made the service premium was its custom interior bus design (Figure 8.1), Wi-Fi capabilities, USB outlets, Blue Bottle Coffee, Bluetooth-check-in ready, GPS, and a social networking component allowing riders to connect with each other (Dowd, 2015). Similar to the Rapidway, design and marketing are key components that stand out as a way to provide users with a bus service that is atypical of any standard public bus system that can be “overloaded and underfunded” (Manjoo, 2015). The concept of a premium service operating in conjunction with “ordinary” public transit, reproduces and strengthens the logic that “winners” or choice riders will continue to have more mobility options than “losers” or disadvantaged and vulnerable groups.

8.2 The role of grassroots organizations

Transportation infrastructure plans involve major stakeholders in Markham however, there is little or no reference in policy documents to the role that transit advocacy groups, not-for-profits, grassroots, and social service sector agencies have throughout the notion of public infrastructure. These types of organizations emerge out of necessity to respond to identified issues to the best of their ability. If resources allow, they attempt to improve the circumstances for people that they are serving. If they are deliberately excluded from the conversation, then they are no longer able to prevent larger issues. The large commuter population in York Region could mean that fewer people feel inclined to actively participate in civic organizations based on the time they spend in their cars. Research from the University of Connecticut has shown that there is in fact a causal relationship between the time one spends in their car and the time they allocate to civic engagement, social life, and politics. Commuters are less likely to engage politically depending on the time and distance of their commute. In retrospect, this problem may be heightened in suburbs where low-income commuters typically spend more time travelling. “Low-income people stuck in awful commutes, in other words, may be discouraged by those very commutes from voting or fighting for policies that would make their lives (and commutes) better” (Badger, 2013).

8.3 Improving the language used in planning

As stated, transportation planning documents make mention of the local positive and negative impacts using terminology that can vary in meaning and interpretation. For example, terminology like public interest, social impact, community based design, sustainable

transportation and even equity do not evoke a singular meaning. The definition of such terms is not always clearly defined within documents, and an explanation of how these impacts will be measured is not always included as Foth, Manaugh, and El-Geneidy (2013) mentioned (p.4). How can a meaningful result transpire from terms that are not effectively defined or that have been left out? Additionally, what picture does this language paint for someone interested in a very concrete results? The solution is for planners to firstly identify the challenges that exist locally and to demonstrate how transportation will assist the community. For example, demonstrating the difference that improved access to transit could make for the health and well-being of particular neighbourhoods in Markham.

When asked if she thinks the language used in planning documents is too loose when discussing community and social impacts of a project, Jay Pitter responded by saying:

“I don’t think that the language is too loose, but I do think there needs to be a better definition of community. Taking the time to really define the people who are in a specific community, to identify shared and oppositional needs, to learn the multiple parallel cultures, is critically important. Then after taking that step, I think it’s very appropriate to develop and agree upon the terms and definition. Using traditional categories for identifying different communities within a single community is not effective because it can be divisive, and because many people belong to more than one community now. Communities, affinity groups, and spaces of belonging are constantly in flux” (Pitter, 2015 personal interview).

Using Gaspar and Ogbu’s article on The Language of Design for Equity as a point of reference, who are the transport disadvantaged community members in Markham? Are they the new immigrant populations who are predominantly of Chinese and South Asian descent? Other groups marginalized based on ethnicity? Low-income and homeless members? Or possibly seniors? The evidence shows that these may in fact be the vulnerable, underserved groups in the municipality. As Gaspar and Ogbu note, defining a community is complex.

“Although it is easy to align “community” solely with underserved populations, designing for equity here means addressing the complexity of the broader community” (Gaspar & Ogbu, 2015). Achieving equity and intended outcomes associated with improved mobility for disadvantaged groups depends greatly on how they are defined within policy. Just as Krumholz did in Cleveland, planning needs to be redefined in a way that best represents the changing landscape in Markham that would most benefit recent immigrants, low-income groups, and seniors.

8.4 Learning from example

In an effort to improve transit “access, quality, affordability and innovation”, Boston’s Go Boston 2030 Vision Framework and Action Plan is an initiative aimed at addressing existing transportation inequities for underserved groups with a focus on three guiding principles: “increasing equity, enhancing economy opportunity, and improving...climate responsiveness” (Stanley, 2015), (Boston Transportation Department, 2015, 4). The first guiding principle of equity is clearly explained, “Boston will proactively address transportation infrastructure gaps in chronically under-served neighborhoods” (Boston Transportation Department, 2015, 6). These gaps will be addressed by ensuring that affordable housing exists along new or revitalised transit corridors, continual maintenance of existing infrastructure, establishing connections to employment areas for low-income groups specifically, using the local start-up economy for innovative transport technologies, and investing in a range of transit modes for underserved communities (Stanley, 2015). The plan also aspires to have “[e]very home in Boston...be within a 10-minute walk of a rail or key bus route, Hubway station, and car-share” (Boston

Transportation Department, 2015, 49). In collaboration with more than 6,000 Boston residents, civic leaders, community partners, and agency representatives, the plan represents a truly progressive example of inclusive transit visioning (Boston Transportation Department, 2015, 2).

Chapter 9 - Conclusion

“[F]ocusing the larger frame...on equity means that we are working towards alleviating the access discrepancies in the first place, as well as the policies, biases, and institutional barriers that create those discrepancies” (Gaspar & Ogbu, 2015). In order to achieve certain goals of incorporating stronger themes of equity into planning policy, there needs to be a strong commitment, from all levels of government, in order to effectively achieve these strategic goals. There also needs to be a shared understanding of why a consideration for equity is important. Why should equity be a priority item that deserves attention alongside the existing mainstream transit priorities like tackling congestion or stimulating growth? As long as growth is the primary imperative in city planning, and governance structures continue to be fragmented, equitable outcomes in transit implementation will be rare unless certain outcomes and frameworks are strictly embedded in planning policies that guide growth in cities. Policy should continue to promote dense and diverse neighbourhoods that compliments transit, but this should not be the only imperative.

The goal of transit planning in the suburbs is one of trying to achieve a perfect harmony of density, ridership, and reduced automobile traffic, at the lowest cost to the taxpayer. The Rapidway is a perfect example of this attempt at achieving balance. It acts as a catalyst for new densities, while providing an express alternative to riders who typically drive. In a low-density environment, it would seem logical for the private sector to have a lessened role in providing transit since the financial risks associated with low ridership are greater. However, the role of the private sector appears fundamental to the Region’s objective of delivering a premium rapid transit service to ease congestion and stimulate development. There is a deliberate intent to

attract premium users to the Rapidway and this in part due to the difficulty of attracting ridership in a low-density environment. A successfully operational BRT system, according to Mees (2010), has a stronger focus placed on region-wide networks and on older existing transport modes rather than focussing heavily on the technology and amount of infrastructure provided (p.127). From this it would seem that the vivaNext strategy of region-wide networks and hubs is a successful plan for York Region, however, greater emphasis needs to also be placed on the existing YRT system that provides greater local service.

The range of actors involved through the process such as public and private sector stakeholders admittedly makes the process much less malleable in terms of incorporating equity. This is assuming that the priorities of private sector actors are strictly focused on maximizing profits rather than improving the quality of life for disadvantaged transit users. What I have learned in trying to understand the intermingling of actors involved in the Rapidway project, is that transparency is key to developing and implementing plans that impact such a great portion of the urban population. For a researcher who has spent a considerable amount of time investigating the Rapidway as a case study, I have found the dynamics of the public-private partnership difficult to understand. The governance structure alone took a considerable amount of time to comprehend and has left me with a feeling of concern for members of the general public who would require this knowledge, but do not have the time, resources, or ability to navigate the data. As Stone (1993) argues, the conceptual difference between public and private sector actors is ambiguous when applied to the empirical realities of urban governance (p.6).

If existing regimes or public-private partnerships are not able to overcome the growing vulnerability of certain groups, then transit needs to either remain a public service or an alternative structure needs to be adopted. But as Stoker (1995) explains, challenging an existing regime is a difficult task. “To assemble an alternative regime, as has been argued...reflects a considerable expression of power” (p.69). Contracting out a public service leads to less transparency with limited financial data publicly available. The P3 has become a new form of governing, and a regressive model for transit equity advocates. New accountability models need to be created to ensure that both public and private sector individuals can be held accountable if a transit project is not planned in an inequitable manner or clearly favours more affluent users.

Within present-day capitalist society, it would appear that increased focus and attention is being paid on how to attract these choice riders because transit is shifting from public service to private. This is done through campaigns, marketing and the promise of a premium service to customers who are willing to pay for it, and at the same time subsidized heavily (Levine, 2013). The choice riders are those who are minimally affected by increasing fares, are provided the most convenient service (during rush hour), and the ones who need to be convinced that they are more than just a typical bus rider. In order to include an equity lens into the transit planning conversation, policy makers need not prove that there is a profitable business case in an equity model, or that the model contributes to growth in the form of development, or that it directly alleviates congestion because these are not the objectives of a more equitable transit system. Just as Krumholz argued, justice and equity should be just as important as policy and growth in planning, and transport policy needs to be reformed into a more equitable process (Levine,

2013). This reform is necessary in progressing forward a society that recognizes the importance of social inclusivity.

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Appendices

Appendix A: Interview questions

Interview questions for a lead engineer involved with the Rapidway

1. What is your name, and current position?
2. What was your role in the planning of the VivaNext Rapidway project?
3. Were there any issues that arose during the implementation phase?
4. Why was highway 7 chosen as the location for the BRT?
5. Are there transport disadvantaged residents of Markham that have high transit dependency that may not utilize the new Viva network and where?
6. During the planning stages of the projects, do you feel considerations were made to serve residents with the least mobility in Markham?
7. If you could improve anything about the existing Rapidway, what would it be?

Interview questions for Jay Pitter

1. What is your name, and current position?
2. What do you think the role of public transit to be?
3. How would you define transit equity?
4. Do you think that the language is too loose in case benefit documents when discussing community and social impacts of a project?
5. Transit as a catalyst for development and growth, and alleviator of congestion. Is this good enough?
6. Is it divisive to label the transport disadvantaged?
7. Have you seen any successes as to better incorporate groups that are left out into the planning process?

Interview questions for Jane Wedlock

1. What is your name, and current position?
2. What is your experience in Markham/ York Region?
3. In your opinion what are the biggest challenges facing new immigrants today in York Region and Markham?
4. To what extent is homelessness and poverty an issue in York Region and Markham?
5. Do you feel new immigrants and/or working poor are treated appropriately or fairly as residents of York Region?
6. Have you found mobility to be an issue in Markham or York Region?
7. With the greatest proportion of low income earners being in Markham, with a significant concentration of new immigrants, would equity be a fair consideration for planning public transit systems?

8. Do you think a business case could or has been made to promote public transit and affordable housing as something inherently good for everybody and not just benefitting those it directly serves?
9. Does debt in the Region have implications to transit planning?
10. I have recently learned that York Region has incurred the largest amount of debt of any other region in the country. Is this something that decision-makers are well aware of? Is this common knowledge to the public?
11. Are there any transit equity groups for York region?

Interview questions for Pierre Barrieau

1. What is your name, and current position?
2. Have you done research related to transit equity?
3. What is your experience with P3's?
4. What is your perspective on BRT? Do you feel it is a cost-effective way to accommodate a greater number of users?
5. Do you think it is fair that transit providers target "choice riders" in an effort to combat congestion and create a modal shift (Eg. those who drive and can afford to pay increasing fares)?
6. Do you think there is hesitation for people to use BRT because after all it is still a bus?

Interview questions for Sean Hertel

1. What is your name, and current position?
2. What was your involvement with the Rapidway project?
3. Are there groups in Markham that are 'transport disadvantaged'?
4. How would you pinpoint who those disadvantaged groups in Markham are?
5. How would you define transit equity?
6. During the planning stages of the projects, do you feel considerations were made to serve residents with the least mobility in Markham?
7. What is your opinion on transit agencies focussing their attention on "choice riders"?

Appendix B: Informed consent forms

Informed Consent Form

Date: June 8/15

Name of Participant: Paul May

Study Name: Achieving equity in public transit planning: A critical assessment of Markham, Ontario's VivaNext Rapidway.

Researchers: Anthony Dionigi, adionigi@yorku.ca, student in the Master in Environmental Studies program at York University Toronto.

Purpose of the Research

What You Will Be Asked to do in the Research: Based on your expertise, I am requesting qualitative data from you, the participant in the form of a verbal explanation in response to various questions I will ask you related to this study. I would like to ask you a few questions about public transit, and in particular, about the Viva bus rapid transit on highway 7 in Markham. This research is part of my Major Research requirement in the MES program.

Risks and Discomforts: I do not foresee any risks or discomfort from your participation in the research. You have the right to not answer any questions.

Benefits of the Research and Benefits to You: The information you provide will assist me greatly in forming my major research paper and to critically assess the case study selected. I will provide you with a copy of my final research paper if you so wish.

Voluntary Participation: Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer will not influence the nature of the ongoing relationship you may have with myself, the researcher or your relationship with York University either now, or in the future.

Withdrawal from the Study: You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researchers, York University, or any other group associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: Unless you choose otherwise, all information you supply during the research will be held in confidence and unless you specifically indicate your consent, your name will not appear in any report or publication of the research. The data collected will be recorded if consent is provided by the interviewee. Your data will be safely stored and locked carefully and only I will have access to this information. The data will be stored for a minimum of two years whereby it will be destroyed after the study. Confidentiality will be provided to the fullest extent possible by law.

Questions about the Research? If you have questions about the research in general or about your role in the study, please feel free to contact my supervisor Professor Douglas Young either by telephone at (416) 736-2100, extension 77829 or by e-mail (dogoyo@yorku.ca). This research has been reviewed and approved by the FES Research Committee, on behalf of York University, and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Research Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Legal Rights and Signatures:

I, Paul May, consent to participate in Achieving equity in public transit planning conducted by Anthony Dionigi. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Revised 05/2015

Signature Paul May
Participant

Date June 8/15

Signature AJ
Principal Investigator

Date June 8/15

I, Paul May agree to allow voice recording of the interview to be used in the publication of Anthony Dionigi's research paper with the understanding that I will not be identified by name. I am aware that I may withdraw this consent at any time without penalty.

Signature Paul May
Participant

Date June 8/15

Informed Consent Form

Date: July 27, 2015

Name of Participant: Sean Hertel

Study Name: Achieving equity in public transit planning: A critical assessment of Markham, Ontario's VivaNext Rapidway.

Researchers: Anthony Dionigi, adionigi@yorku.ca, student in the Master in Environmental Studies program at York University Toronto.

Purpose of the Research

What You Will Be Asked to do in the Research: Based on your expertise, I am requesting qualitative data from you, the participant in the form of a verbal explanation in response to various questions I will ask you related to this study. I would like to ask you a few questions about public transit, and in particular, about the Viva bus rapid transit on highway 7 in Markham. This research is part of my Major Research requirement in the MES program.

Risks and Discomforts: I do not foresee any risks or discomfort from your participation in the research. You have the right to not answer any questions.

Benefits of the Research and Benefits to You: The information you provide will assist me greatly in forming my major research paper and to critically assess the case study selected. I will provide you with a copy of my final research paper if you so wish.

Voluntary Participation: Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer will not influence the nature of the ongoing relationship you may have with myself, the researcher or your relationship with York University either now, or in the future.

Withdrawal from the Study: You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researchers, York University, or any other group associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: Unless you choose otherwise, all information you supply during the research will be held in confidence and unless you specifically indicate your consent, your name will not appear in any report or publication of the research. The data collected will be recorded if consent is provided by the interviewee. Your data will be safely stored and locked carefully and only I will have access to this information. The data will be stored for a minimum of two years whereby it will be destroyed after the study. Confidentiality will be provided to the fullest extent possible by law.

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Legal Rights and Signatures:

I, Sean Hertel, consent to participate in *Achieving equity in public transit planning* conducted by *Anthony Dionigi*. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Revised 05/2015

Signature _____
Participant
Signature _____
Principal Investigator

Date 17/09/2015
Date 17/09/2015

I, Sean Hertel agree to allow voice recording of the interview to be used in the publication of Anthony Dionigi's research paper with the understanding that I will not be identified by name. I am aware that I may withdraw this consent at any time without penalty.

Signature _____
Participant

Date 17/09/2015

Informed Consent Form

Date: August 19, 2015

Name of Participant: Pierre Barrieau

Study Name: Achieving equity in public transit planning: A critical assessment of Markham, Ontario's VivaNext Rapidway.

Researchers: Anthony Dionigi, adionigi@yorku.ca, student in the Master in Environmental Studies program at York University Toronto.

Purpose of the Research

What You Will Be Asked to do in the Research: Based on your expertise, I am requesting qualitative data from you, the participant in the form of a verbal explanation in response to various questions I will ask you related to this study. I would like to ask you a few questions about public transit, and in particular, about the Viva bus rapid transit on highway 7 in Markham. This research is part of my Major Research requirement in the MES program.

Risks and Discomforts: I do not foresee any risks or discomfort from your participation in the research. You have the right to not answer any questions.

Benefits of the Research and Benefits to You: The information you provide will assist me greatly in forming my major research paper and to critically assess the case study selected. I will provide you with a copy of my final research paper if you so wish.

Voluntary Participation: Your participation in the study is completely voluntary and you may choose to stop participating at any time. Your decision not to volunteer will not influence the nature of the ongoing relationship you may have with myself, the researcher or your relationship with York University either now, or in the future.

Withdrawal from the Study: You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researchers, York University, or any other group associated with this project. In the event you withdraw from the study, all associated data collected will be immediately destroyed wherever possible.

Confidentiality: Unless you choose otherwise, all information you supply during the research will be held in confidence and unless you specifically indicate your consent, your name will not appear in any report or publication of the research. The data collected will be recorded if consent is provided by the interviewee. Your data will be safely stored and locked carefully and only I will have access to this information. The data will be stored for a minimum of two years whereby it will be destroyed after the study. Confidentiality will be provided to the fullest extent possible by law.

Questions about the Research? If you have questions about the research in general or about your role in the study, please feel free to contact my supervisor Professor Douglas Young either by telephone at (416) 736-2100, extension 77829 or by e-mail (dogoyo@yorku.ca). This research has been reviewed and approved by the FES Research Committee, on behalf of York University, and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Research Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Legal Rights and Signatures:

I, Pierre Barrieau, consent to participate in Achieving equity in public transit planning conducted by Anthony Dionigi. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Revised 05/2015

Pierre Barrieau
Digitally signed by Pierre Barrieau
DN: cn=Pierre Barrieau, o=Université du Québec à Montréal,
ou=emilie.pierre.barrieau@gmail.com, c=CA
Date: 2015.12.06 18:19:34 -0500

Signature
Participant

Signature
Principal Investigator

Date Dec. 06, 2015

Date Dec. 06, 2015

I, Pierre Barrieau agree to allow voice recording of the interview to be used in the publication of Anthony Dionigi's research paper with the understanding that I will not be identified by name. I am aware that I may withdraw this consent at any time without penalty.

Pierre Barrieau
Digitally signed by Pierre Barrieau
DN: cn=Pierre Barrieau, o=Université du Québec à
Montréal, ou=emilie.pierre.barrieau@gmail.com, c=CA
Date: 2015.12.06 18:19:31 -0500

Signature
Participant

Date Dec. 06, 2015

Revised 05/2015

Informed Consent Form

Date: Aug. 26, 2015
Name of Participant: Valerie Preston

Study Name: Achieving equity in public transit planning: A critical assessment of Markham, Ontario's VivaNext Rapidway.

Researchers: Anthony Dionigi, adionigi@yorku.ca, student in the Master in Environmental Studies program at York University Toronto.

Purpose of the Research

What You Will Be Asked to do in the Research: Based on your expertise, I am requesting qualitative data from you, the participant in the form of a verbal explanation in response to various questions I will ask you related to this study. I would like to ask you a few questions about public transit, and in particular, about the Viva bus rapid transit on highway 7 in Markham. This research is part of my Major Research requirement in the MES program.

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Legal Rights and Signatures:

I, Valerie Preston, consent to participate in Achieving equity in public transit planning conducted by Anthony Dionigi. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Revised 05/2015

Signature Valerie Preston
Participant

Date Aug. 25, 2015

Signature Valerie Preston
Principal Investigator

Date AUG 25, 2015

I, APR agree to allow voice recording of the interview to be used in the publication of Anthony DiGiorgio's research paper with the understanding that I will not be identified by name. I am aware that I may withdraw this consent at any time without penalty.

Signature N/A
Participant

Date AUG 25 2015

Informed Consent Form

Date: Aug 25, 2015

Name of Participant: Jay Pitter

Study Name: Achieving equity in public transit planning: A critical assessment of Markham, Ontario's VivaNext Rapidway.

Researchers: Anthony Dionigi, adionigi@yorku.ca, student in the Master in Environmental Studies program at York University Toronto.

Purpose of the Research

What You Will Be Asked to do in the Research: Based on your expertise, I am requesting qualitative data from you, the participant in the form of a verbal explanation in response to various questions I will ask you related to this study. I would like to ask you a few questions about public transit, and in particular, about the Viva bus rapid transit on highway 7 in Markham. This research is part of my Major Research requirement in the MES program.

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Legal Rights and Signatures:

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Revised 05/2015

Signature _____
Participant

Date AUGUST 25/15

Signature _____
Principal Investigator

Date AUG 25, 2015

I, Jay Ritter agree to allow voice recording of the interview to be used in the publication of Anthony Dionigi's research paper with the understanding that I will not be identified by name. I am aware that I may withdraw this consent at any time without penalty.

Signature _____
Participant

Date AUG. 25/15

Informed Consent Form

Date: Sept. 11, 2015

Name of Participant: Jane Wedlock

Study Name: Achieving equity in public transit planning: A critical assessment of Markham, Ontario's VivaNext Rapidway.

Researchers: Anthony Dionigi, adionigi@yorku.ca, student in the Master in Environmental Studies program at York University Toronto.

Purpose of the Research

What You Will Be Asked to do in the Research: Based on your expertise, I am requesting qualitative data from you, the participant in the form of a verbal explanation in response to various questions I will ask you related to this study. I would like to ask you a few questions about public transit, and in particular, about the Viva bus rapid transit on highway 7 in Markham. This research is part of my Major Research requirement in the MES program.

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Legal Rights and Signatures:

I, JANE WEDLOCK, consent to participate in *Achieving equity in public transit planning* conducted by Anthony Dionigi. I have understood the nature of this project and wish to participate. I am not waiving any of my legal rights by signing this form. My signature below indicates my consent.

Revised 05/2015

Signature Jane Wedlock
Participant

Date Sept 11, 2015

Signature A. Dionigi
Principal Investigator

Date Sept. 11 2015

I, JANE WEDLOCK agree to allow voice recording of the interview to be used in the publication of Anthony Dionigi's research paper with the understanding that I will not be identified by name. I am aware that I may withdraw this consent at any time without penalty.

Signature Jane Wedlock
Participant

Date Sept 11, 2015