Chapter **Six**

Travel Demands and Trends

Rendering of Markham Centre

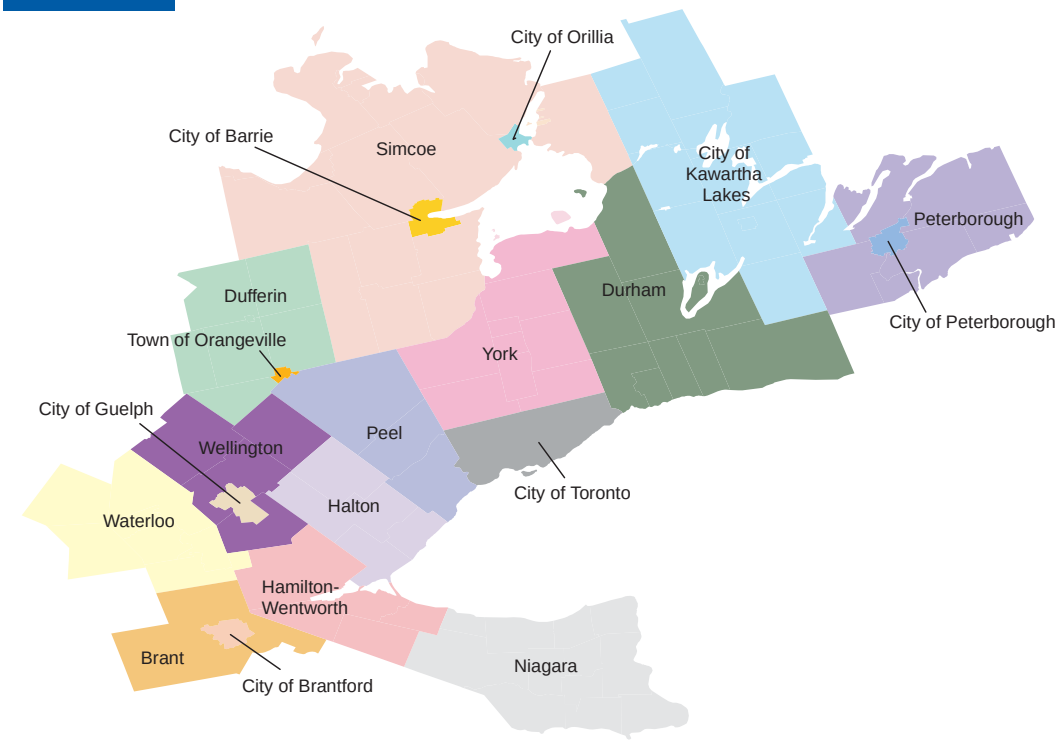
York Region

Why York Region monitors travel demand

The main purpose for collecting travel behaviour information from household travel surveys is to understand the travel habits of residents and provide base data for long range planning such as policy and program development and the development of travel demand models. Travel Demand Forecasting Models cannot be developed solely on the basis of traffic and transit counts. These models simulate all components of travel behaviour: auto ownership, trip frequency (trip generation) and the distribution of trips between origins and destinations by travel mode. Travel surveys answer basic questions such as: where do people travel to and from, are they making more trips per person and are their modes of travel changing?

Appropriate policies and programs can be developed to focus on specific travel behaviour, such as improving and promoting transit use, carpooling, cycling and walking. York Region, along with other municipalities in the Greater Toronto and Hamilton Area (GTHA) conduct two primary travel surveys, the ***Transportation Tomorrow Survey (TTS)*** and the ***Cordon Count Program*** to assist in understanding the travel behaviours of its residents and traffic patterns.

Figure 40 2006 Transportation Tomorrow Survey



Transportation Tomorrow Survey

The ***Transportation Tomorrow Survey (TTS)*** is a travel demand survey conducted on behalf of 21 single-tier, Regional, Provincial and public transit agencies in southern Ontario including York Region.
Figure 40 illustrates the 2006 Transportation Tomorrow Survey participating regions. The survey engages approximately 150,000 households in Central Ontario and collects information that assist planners to understand and meet the future transportation needs of residents.

The TTS has been conducted every five years since 1986. The information provided by residents creates a database for long-range transportation planning improvements to transportation facilities and transit services. In addition to trip information for each household member (i.e., origin, destination, time, reason for travel, mode of transportation), the number of vehicles available for personal use and where each family member works or attends school are also asked.

Transportation Tomorrow Survey (continued)

The 2011 Transportation Tomorrow Survey contacted York Region households between September and December of 2011 and again in 2012. Approximately 15,000 randomly-selected York Region households were contacted by professional telephone interviewers and asked about their recent travel choices and preferences. This represented a sample completion rate of five per cent of York Region households.

Since the 2011 TTS results will not be available until early 2014, this edition (2013) of the Transportation Fact Book presents some of the 2006 TTS travel characteristics for York Region during the weekday morning peak period (6 a.m. to 9 a.m.). This will set the stage for comparison with the 2011 TTS survey results when it is made available.

Contact Information

For more information on the Transportation Tomorrow Survey please contact:

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www.transportationtomorrow.on.ca

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- The 2011 TTS involved about **15,000 households** in York Region, representing a **five per cent** sample size

Future rapid transit to accommodate growth

Table 11 - 2006 Travel Patterns and Characteristics

2006 TTS Characteristics	York Region	Greater Toronto and Hamilton Area (GTHA)
No. of Available Vehicles per household	1.8	1.4
Residents with Driver's License (%)	68%	64%
Residents with Transit Pass (%)	6%	8%

Table 11 summarizes some 2006 travel patterns and characteristics in York Region.

Travel Characteristics

The percentage of York Region residents using transit for their morning commute has increased for the first time in 20 years.

York Region had the highest percentage increase in weekday transit trips in the GTA, increasing by 61,000 trips per day, or 91 per cent between 2001 and 2006. This is consistent with the increase in annual transit ridership on York Region Transit that has grown from 7.7 million in 2001 to 17.1 million in 2006.

Daily trips by York Region residents (using all modes of travel) to, from and within York Region have increased by 650,000 trips (54 per cent). In the past decade it has increased from 1,200,000 trips per day in 1996 to over 1,850,000 trips per day in 2006. This does not include trips through York Region or truck and other commercial vehicle trips. In comparison, GTHA residents make 12.2 million trips per day; 7.6 million of these trips are by automobile.

Automobile use (79 per cent during a typical weekday morning peak period) is the main transportation mode in York Region. The rate of public transit use is 9 per cent with a further 5 per cent by school bus as shown in **Figure 41.**

York Region residents are making approximately 5 per cent less daily trips per capita than in 2001.

The indicator for average trip length for York Region residents has continued to decline from 16.5 kms in 1986 to 15.0 kms in 2006.

Travel Characteristics (continued)

45 per cent of work trips made by York Region residents during a typical weekday morning peak period remain within the Region. Work trip destinations to other areas are: Toronto - 42 per cent, Peel - 7 per cent, Halton - 1 per cent, Durham - 1 per cent and Simcoe County - 1 per cent.

York Region residents make 1.85 million trips on an average weekday and 465,400 trips during a typical weekday morning peak period.

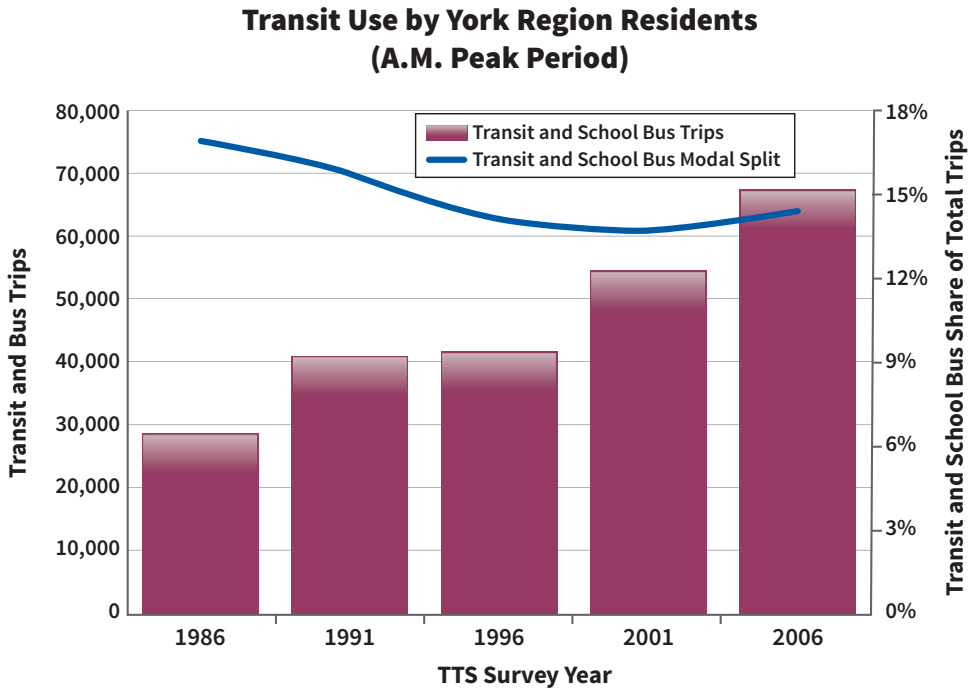
Residents of Vaughan, Richmond Hill and Markham make 75 per cent of the total morning peak period trips in York Region.

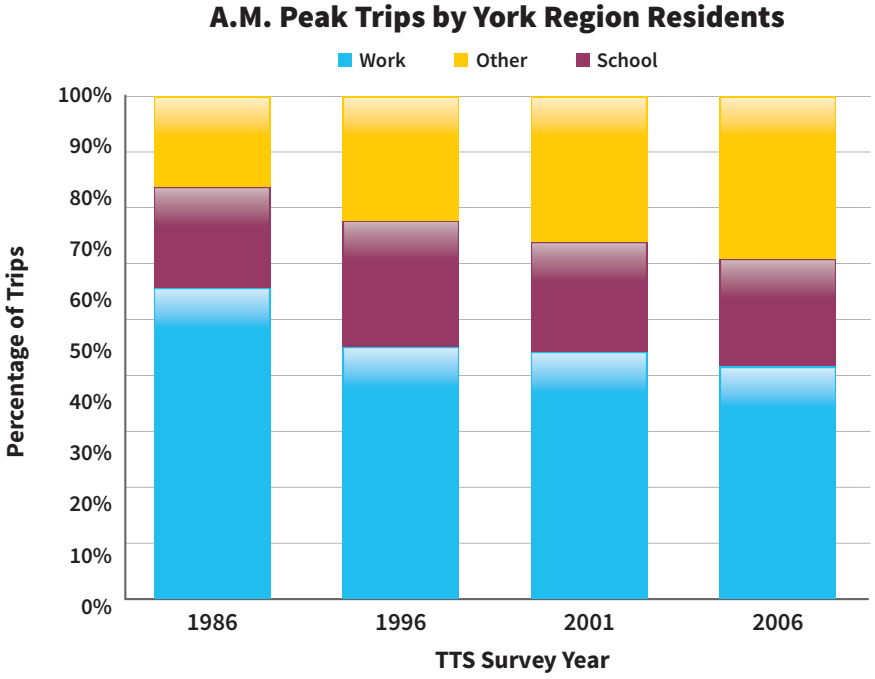
Work trips to York Region have the highest average trip length in comparison to the other regions in the GTHA. In general, work trip lengths are increasing across the GTHA.

Figure 41 also shows that non-work and non-school (commonly called discretionary) trips are becoming more and more important. This category now represents more than 50 per cent of the daily trips and over 30 per cent of all morning peak period travel made by York Region residents.

Future Centres and Corridors in the City of Markham

Figure 41 - Transit Use and Trips Made by York Region Residents - A.M. Peak





Cordon Count Program

The Cordon Count Program is a vehicle and person survey that has been conducted in York Region on a regular basis since 1983. Collecting consistent and accurate classified vehicle information is an important element of transportation planning. It provides a time series data of traffic flow across a set of screenlines to monitor changes to the travel pattern and characteristics. The Cordon Count Program is co-ordinated with the City of Toronto, the Regions of Durham, Peel, Halton, as well as GO Transit, TTC and the Ministry of Transportation.

The Cordon Count Program involves vehicle and vehicle occupancy counts at over 250 counting stations across the Region. Counting stations are established at key travel locations throughout the GTA. A series of stations are used to form a screenline. A screenline is a pre-determined imaginary line spanning a major road, municipal boundary, a man-made boundary (such a railway) or a natural boundary (such as a river).

The Cordon Count Program collects information on trips made by persons and vehicles, in addition to various modes of transportation, such as cars, buses, taxis, GO Trains, subways, streetcars and bikes. Specific details on vehicle type and number of occupants per vehicle are gathered in order to capture a complete set of data regarding individual person and vehicular movements across a screenline.

One-day counts are taken, at each station during the months of April, May and June (prior to the end of school). The surveys are undertaken on weekdays, except Fridays over a total of 14 hours (6:00 a.m. to 8:00 p.m.) to provide a snapshot of traffic passing a specific point.

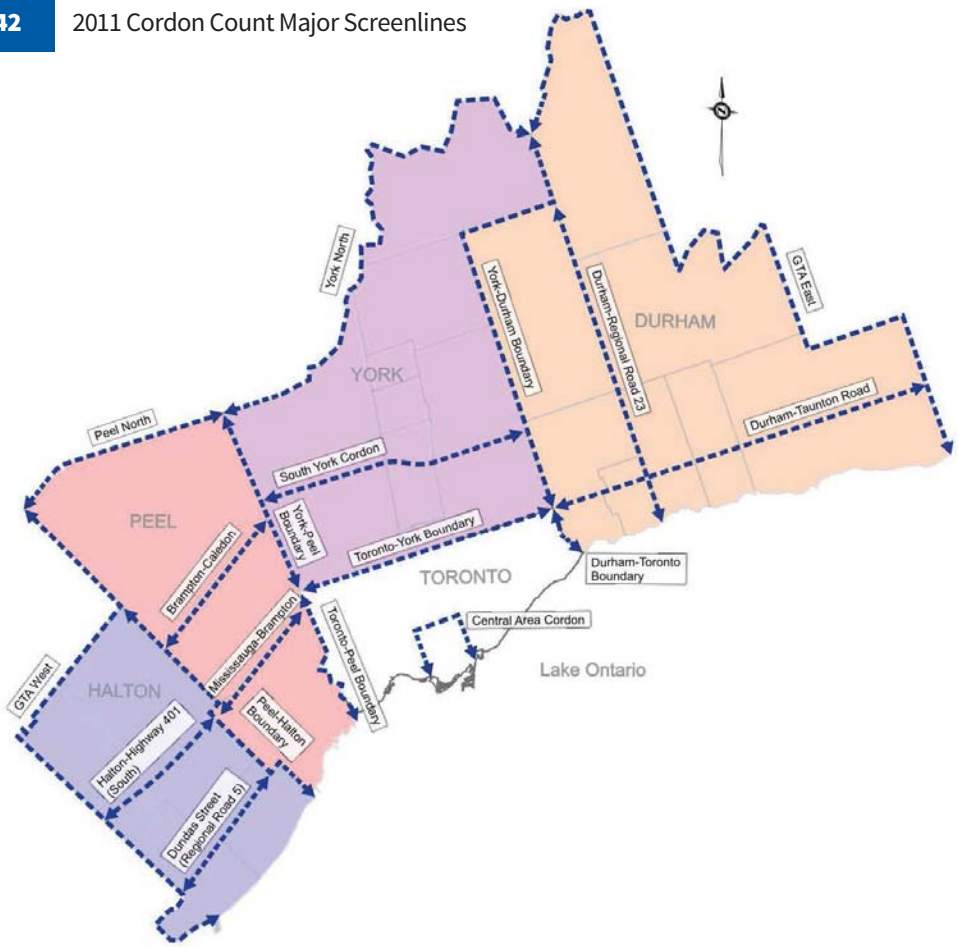
Records of the vehicle types and vehicle occupancy numbers are taken at 15-minute intervals. The following vehicle types are recorded:

- Passenger cars, taxis and light trucks with one, two, three, four or more occupants
- Medium and heavy trucks
- YRT/Viva buses, Brampton Transit, TTC, GO Transit, school buses and others
- Bicycles

Cordon Count Program (continued)

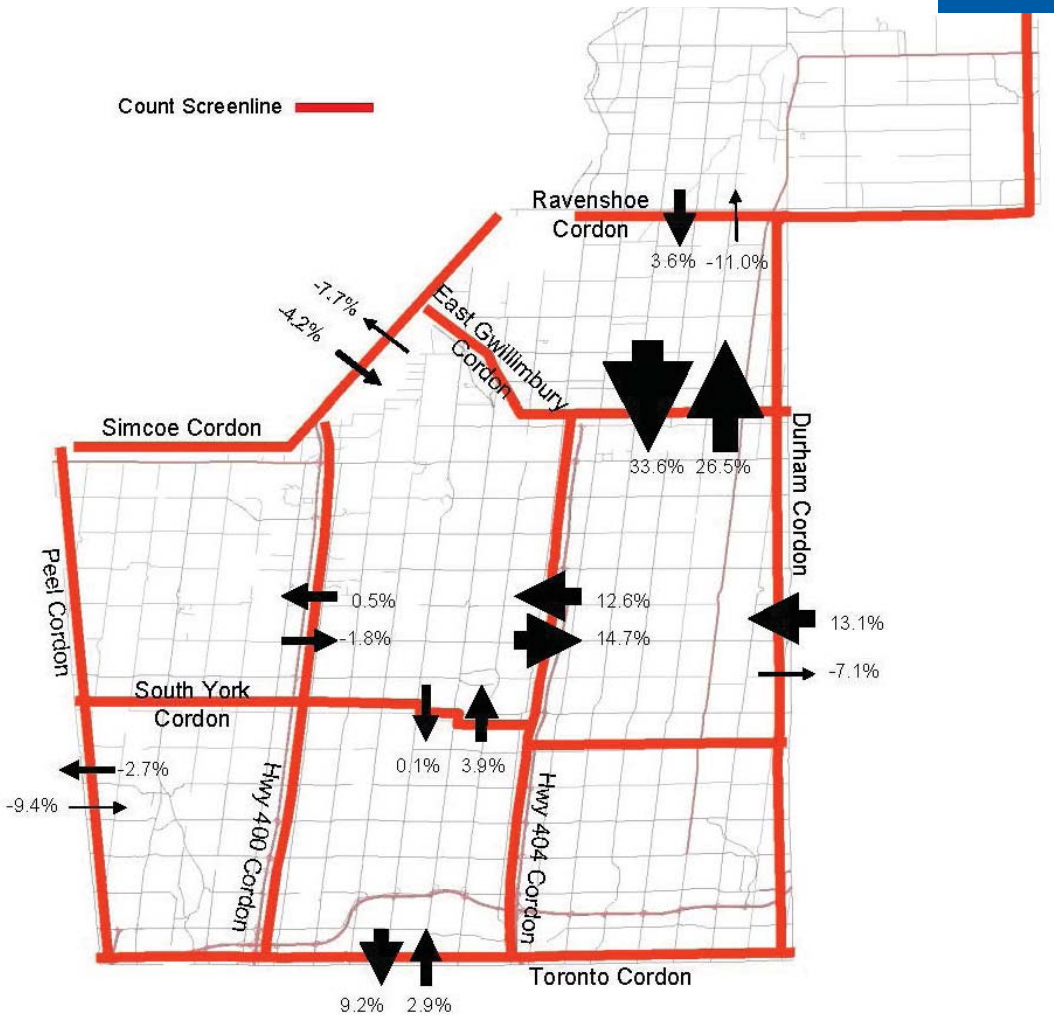
The full cordon count is conducted every five years with 2011 being the latest. Interim counts on select screenlines and stations are undertaken in between full cordon counts. The last interim count was conducted in 2009. **Figure 42** illustrates the 2011 cordon count major screenlines in the GTA, while **Figure 43** illustrates the per cent change in a.m. peak period traffic flow between 2006 and 2011 in York Region

Figure 42 2011 Cordon Count Major Screenlines



Percentage Change in A.M. Peak Period Traffic Flow Between 2006 and 2011

Figure 43



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Highlights of the 2011 Cordon Count Program:

- The 400-series highways in York Region (400, 427 and 404) carry 39 per cent of the traffic crossing Steeles Avenue during all-day 12-hour period. In the 10-year period between 2001 and 2011, traffic increased by 17.9 per cent or 163,190 two-way vehicular trips during the 12-hour period, with a growth of 11 per cent in the northbound direction and 15 per cent in the southbound, during the a.m. peak period. Total daily person trips have increased by 20 per cent, which is a result of the increase in population and employment during the same period
- The 2011 data shows that in the morning peak period, 59 per cent of the total traffic crossing the Steeles Avenue screenline travelled south, while 41 per cent travelled north. This has not changed significantly since the 2001 and 2006 surveys when 58 per cent of the total traffic crossing the Steeles Avenue screenline travelled south and 42 per cent travelled north. Earlier cordon count results had shown a more balanced north-south trend across the Steeles Avenue screenline, with 53 per cent southbound and 47 per cent northbound vehicles crossing Steeles Avenue during the morning peak period in 1998
- The York-Toronto Cordon Screenline shows that eight per cent of the person trips crossing the York-Toronto boundary were made by bus, four per cent by GO Train, nine per cent by carpooling and 77 per cent by driving **(Figure 44)**
- The South York Cordon count was conducted to monitor changes to north-south traffic within York Region. A growth of almost 29 per cent in total vehicles in a 12-hour day between the years 2001 and 2011 was observed. Total person trips increased by almost 27 per cent, while there was a slight decline in transit usage in the 12-hour period. There was an increase of two per cent in the truck usage over the same period

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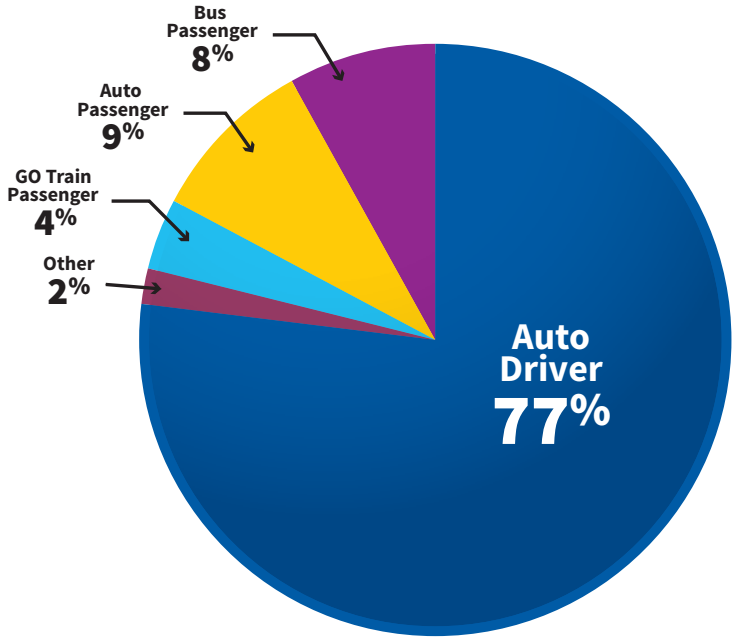
The screenlines that experience the highest growth in total person trips between 2001 and 2011 in GTA are:

- **Toronto Central Area Cordon +303,794**
- **Toronto – York Boundary +294,252**
- **Toronto – Peel Boundary +196,966**
- **Peel – Halton Boundary +144,613**
- **Mississauga – Brampton +97,631**

Figure 44

Toronto Cordon - 2011 Person Trips
A.M. Peak Period (6:30 to 9:30 a.m.)



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Auto occupancy levels are monitored very closely as minor changes in the average level of car occupancy can have a significant effect on total traffic volume and congestion levels. Below are the ranking of the screenlines with **highest auto occupancy** during the A.M. Peak periods:

- Halton – Highway 401 (South) 1.20
- Durham – Taunton Road 1.15
- Toronto Central Area Cordon 1.14
- Peel North 1.14
- **Toronto – York Boundary 1.12**

Highlights of the 2011 Cordon Count Program (continued):

- Cycling trips were counted for the first time during the 2011 Cordon Count Program. A total of 3,600 cycling trips were counted during the 12-hour period on Regional roads, 2,100 of these trips crossed the Steeles Avenue boundary.
- Per cent of truck traffic increased across the majority of the screenlines.

For more detailed information on the Cordon Count Program, visit ***www.york.ca*** to download the 2011 Cordon Count Bulletin and 2011 GTA Wide Cordon Count Report.

Contact Information
For more information on the Cordon Count Program or to obtain a copy of the Cordon Count Bulletin please contact:
Transportation Planning Branch
Phone: 905-830-4444, ext. 75080
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Email: transportationservices@york.ca

Morning traffic on 16th Avenue in the City of Markham

Construction on Highway 7 to meet growth demand in the Town of Richmond Hill