

TRAVEL PATTERNS AND CHARACTERISTICS



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Why Do We Conduct Travel Surveys?

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 the basic questions of: have trip rates (trip frequencies) changed? Are average trip lengths stable over time?

Appropriate policies and programs can be developed to target specific travel behaviour such as improving and promoting transit use, carpooling, cycling and walking. York Region, along with other municipalities in the GTA + Hamilton (GTAH) 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.

Cordon Count Program

The Cordon Count Program involves vehicle and occupancy counts at over 180 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.

Transportation Tomorrow Survey (TTS)

The Transportation Tomorrow Survey is a factual survey that collects information on how members of a household use the transportation system. Last updated in 2006, the TTS completed approximately 150,000 household interviews, of which 14,200 were in York Region.

In addition to trip information of each household member (i.e. trip origin, destination, time, purpose, method of travel) survey participants are asked about age, gender, employment status, size of household and number of motor vehicles owned.

Information on these studies is further described in the next pages.



CONTACT INFORMATION

For more information on Travel Surveys please contact:

Infrastructure Planning Branch
Planning and Development Services Department

 905-830-4444
ext. 5024

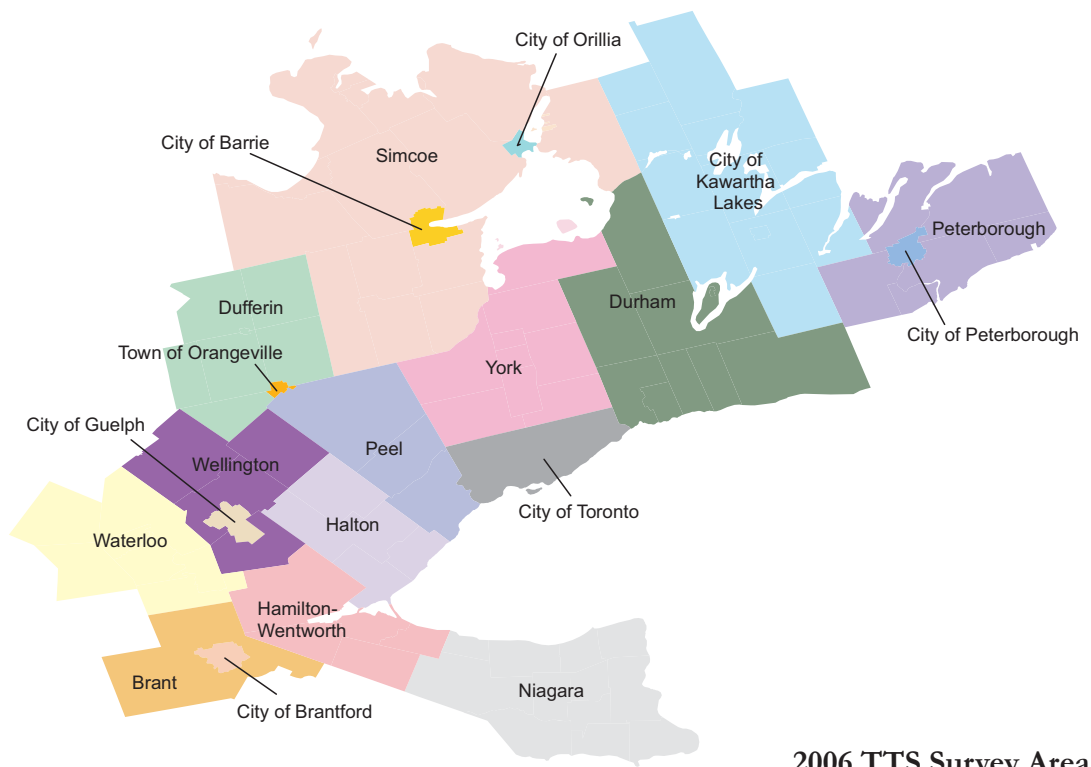
 1-877-464-9675
ext. 5024

2006 Transportation Tomorrow Survey (TTS)



DID YOU KNOW?

The 2006 TTS completed approximately 150,000 household interviews, of which 14,220 were in York Region. It represents a 5% random sampling of all households in the GTAH. The survey collected the daily travel patterns of 402,000 people making over 864,000 trips. Overall the survey represents the daily travel patterns of 7.7 million people across the GTAH and surrounding regions. The next TTS will be conducted in 2011.



2006 TTS Survey Area

CONTACT INFORMATION

For more information on the Transportation Tomorrow Survey please contact:

Data Management Group

University of Toronto
35 St. George Street,
Room 305
Toronto, ON M5S 1A4

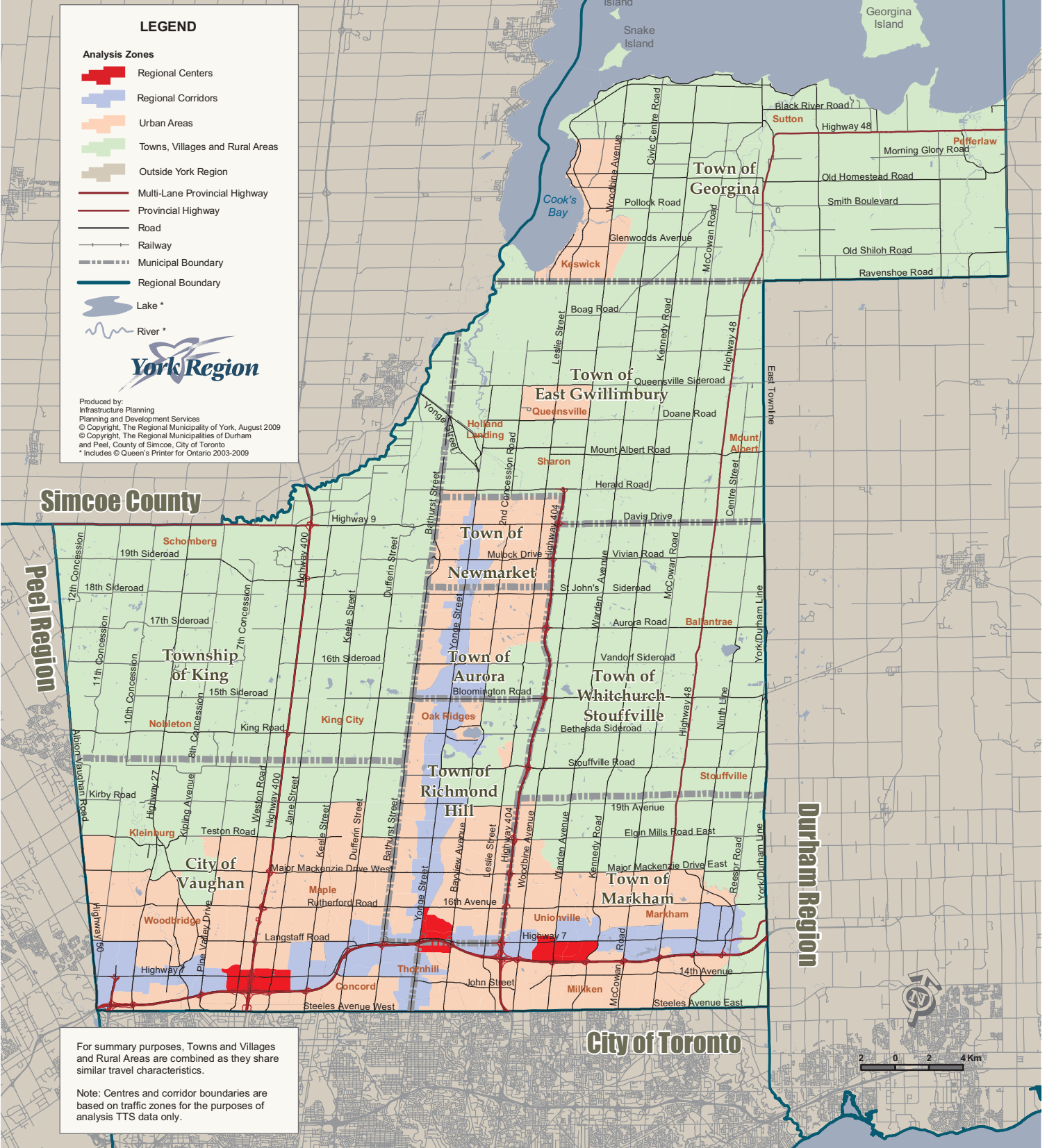
416-978-7282

<http://www.transportationtomorrow.on.ca>

The 2006 Transportation Fact Book summarized the 2006 Transportation Tomorrow Survey (TTS) indicators for the Region as a whole. This edition presents TTS data broken down into four spatial aggregations within York Region: Regional Centres (**Centres**), Regional Corridors (**Corridors**), remaining urban areas (**Urban**) and towns, villages and rural areas (**Rural**). In addition, Regional summaries and GTAH data are presented as a baseline. A map of the spatial aggregations is shown on page 66.

Considered one of the largest travel surveys in North America, the TTS is a comprehensive travel survey conducted in the Greater Toronto Area + Hamilton (GTAH) once every five years. This important travel survey is a cooperative effort by the Province of Ontario, 18 local government agencies, GO Transit and the Toronto Transit Commission to collect information about urban travel. An understanding of urban travel results in better decisions on road and transit improvements. Similar surveys were undertaken in 1986, 1991, 1996, 2001 and 2006. The resulting information has been widely used in literally hundreds of transportation planning studies.

Transportation Tomorrow Survey - Analysis Zones



Travel Characteristics of the York Region Household

Number of Cars Available

Accessibility to the auto influences transit use. Higher auto availability indicates higher auto dependency. 95% of households in the Regional Centres, 88% in the Regional Corridors, while 75% in rural areas have two or fewer cars. Similarly, only 24% of households in the rural areas have one or fewer cars, while almost half (45%) of households in the Regional Centres, and 43% in the Regional Corridors require the same. This suggests a stronger dependency on transit within urban York.

Number of Cars Available to a Household

Location	No cars	1 car	2 cars	3 cars	4+ cars
Centres	4%	42%	50%	4%	1%
Corridors	8%	35%	45%	10%	3%
Urban	3%	28%	52%	13%	4%
Rural	3%	22%	51%	16%	9%
All of York	4%	29%	50%	12%	4%
GTAH	16%	40%	35%	7%	2%

Possession of Driver's Licence

The rate of possession of a driver's licence is also an indicator of auto dependency. There is a higher percentage of both men and women with a driver's license in the rural areas than those in the urban areas of the Region. Residents in the Regional Centres have the lowest incidence of possession of a driver's license, indicating a lower dependence on the automobile.

Licensed Drivers

Location	Yes		No	
	Male	Female	Male	Female
Centres	69%	59%	31%	41%
Corridors	72%	67%	28%	33%
Urban	71%	63%	29%	37%
Rural	76%	73%	24%	27%
All of York	71%	65%	29%	35%
GTAH	69%	59%	31%	41%



Where York Region Residents Travel to Work

63% of all work trips from rural areas remain in the Region compared to 45%, 49%, and 45% within the urban areas, Regional Centres and Regional Corridors respectively. Similarly, unlike the remainder of the Region (44%), only 25% of the work trips from the rural areas are destined to the City of Toronto. Peel Region represents the third major destination for work trips at 7% for all York Region residents.

Work Trip Origins/ Destinations	Toronto	Durham	York	Peel	Halton	Hamilton	Other
Centres	45%	1%	45%	8%	1%	0%	0%
Corridors	41%	1%	49%	7%	1%	0%	1%
Urban	45%	1%	45%	7%	1%	0%	1%
Rural	25%	3%	63%	6%	0%	0%	3%
All of York	42%	1%	48%	7%	1%	0%	1%
GTAH	48%	6%	14%	19%	6%	6%	2%



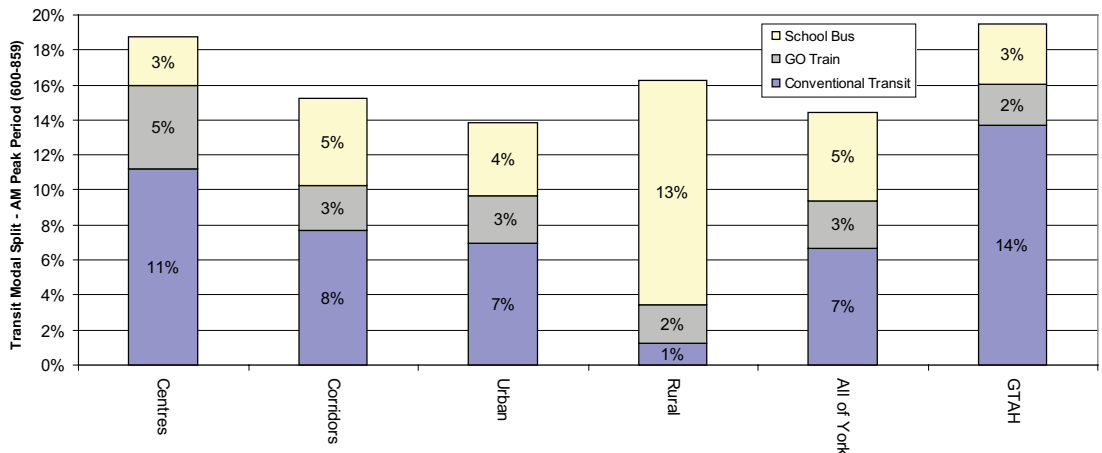
DID YOU KNOW?

In York Region, **Transit Modal Split** is defined as the percentage of person-trips made using public transit and school buses relative to the total number of person-trips made by all modes of transportation including private vehicles, walking and/or cycling.

Transit Modal Split

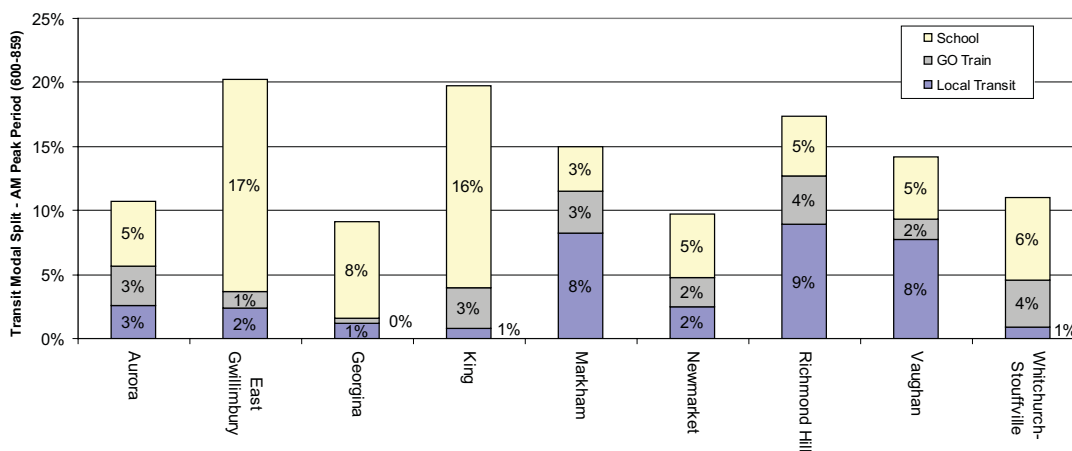
As expected, transit use across the Region is more in urbanized areas in the Region (Regional Centres and Corridors) with convenient access to transit than those in the urban or rural areas with poor accessibility. The following charts show the primary mode of travel for all residents aged 11 or more during the morning period living within each of the summary areas. The percentage of trips during the morning period by GO Train or conventional transit are: Regional Centres (16%), Regional Corridors (11%), urban areas (10%) and rural areas (3%). Transit use originating from the Regional Centres, 11% conventional transit and 5% GO Train, is consistent with the rest of the GTAH.

An interesting comparison within York Region is the influence of school buses on Transit Modal Split, the diversity in geographic characteristics between urban and rural York Region has resulted in varying transportation modes of adolescents (age 11+) for trips to school. Rural areas still show a significant dependence on school buses (13%), while more urban areas rely to a greater extent on transit services provide by York Region Transit.





By including school buses in the Transit Modal Split calculations, it results in trips originating from the Township of King (20%) and East Gwillimbury (20%) having the highest transit use during the morning period. However, only second to Georgina (< 2%), their transit modal split using public transit is among the lowest in the Region at around 4%.



Cordon Count / Screenline Program



What is the 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 one of the very important elements in providing traffic statistics. 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 coordinated 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 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 as a railway) or a natural boundary (such as a river).

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 am to 8:00 pm) to provide



DID YOU KNOW?

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.

a snapshot of traffic passing a specific point. Although data is collected over a longer period of time, cordon count data is typically presented as 'all-day' or 12-hour from 7:00 am to 7:00 pm.

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

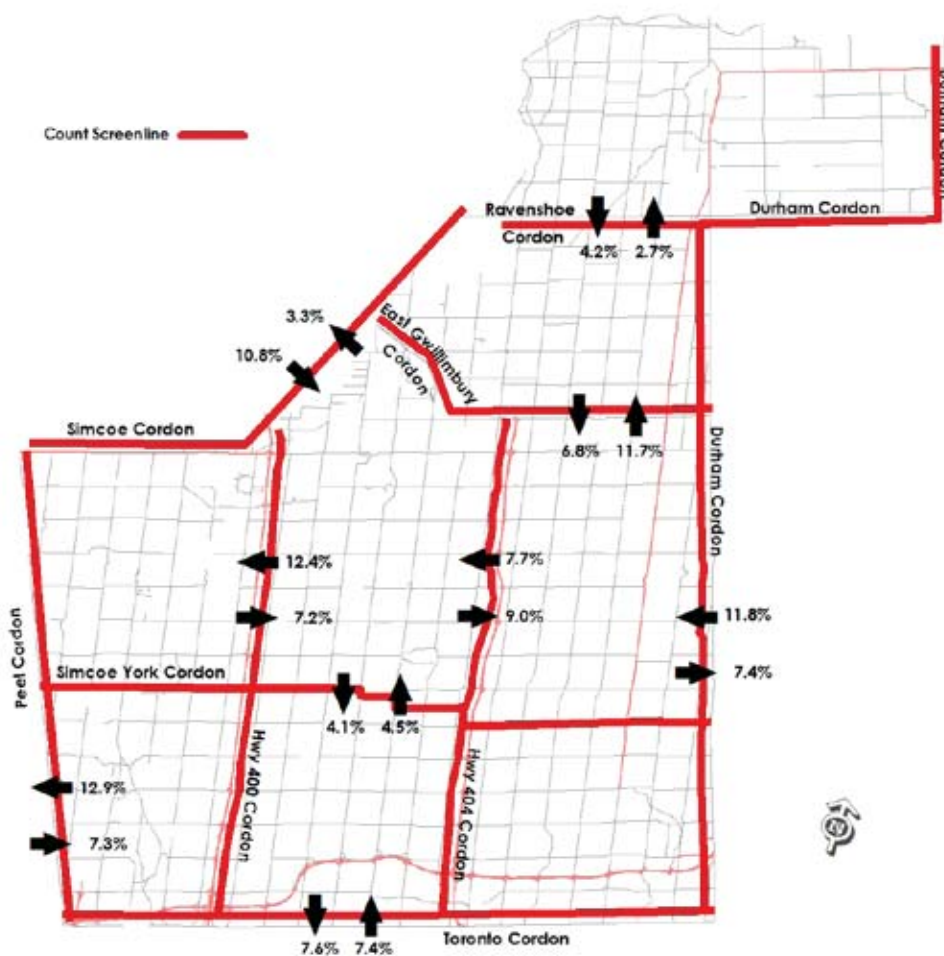
- Passenger cars, taxicabs and light trucks with 1, 2, 3, 4 and more occupants.
- Medium and heavy trucks.
- York Region Transit (YRT), Viva Rapid Transit, Brampton Transit, TTC, GO Transit, school buses and other buses.

The full cordon count is conducted every 5 years with 2006 being the latest. Interim counts on select screenlines and stations are undertaken in between full cordon counts. 2009 was an interim count with the next full cordon count planned for 2011.

Preliminary highlights of the 2009 Cordon Count Program, are as follows:

- All day person trips across all screenlines grew in 2009 relative to 2006. This growth ranged between 2% at the Simcoe Cordon to 16% at the Durham and Highway 404 Cordons. Highway 407 accounted for 42% of the traffic crossing the York-Peel boundary and 26% of the traffic crossing the York-Durham boundary.
- Average car occupancy rates increased across all screenlines.

Percent Change in A.M. Peak Period Traffic Flow between 2006 and 2009



- Transit share have stayed relatively constant, with changes of $\pm 1\%$ across all screenlines. The Toronto screenline is where the highest transit use was observed and showed an increase of 16% in ridership but only a 1% increase in modal share over the 12 hour period.
- Truck volumes across all screenlines showed a general downward pattern. The most significant change was observed at the Peel boundary where truck volumes declined by 2%.
- Changes in truck volumes, car occupancy rates and transit modal shares are reflective of the effects of higher fuel costs and the current economic recession, as well as the cumulative positive effects of York Region transit and travel demand management initiatives.

For more detailed information on the Cordon Count Program, please download the 2009 Cordon Count Bulletin, or visit the study website at: <http://www.york.ca/Services/Regional+Planning/Infrastructure/CordonCountProgram.htm>.

CONTACT INFORMATION

For more information on the Cordon Count Program or to obtain a copy of the Cordon Count Bulletin please contact:

Infrastructure Planning Branch

Planning and Development Services Department

905-830-4444 ext. 5028

1-877-464-9675 ext. 5028

<http://www.york.ca/Services/Regional+Planning/Infrastructure>