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2009 YORK REGION CORDON COUNT PROGRAM

The Transportation Services Committee recommends the adoption of the recommendation contained in the following report dated November 19, 2009, from the Commissioner of Planning and Development Services.

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk forward a copy of this report to the Clerks of the local municipalities, Ministry of Transportation, City of Toronto, GO Transit, Toronto Transit Commission and the Regions of Peel and Durham.

2. PURPOSE

This report presents the results and major findings of the 2009 Cordon Count Program including the comparison to 2006 data.

3. BACKGROUND

The purpose of the cordon count program is to collect and report on changes in commuting behaviours and travel patterns such as the number of persons and vehicles crossing given screenlines in York Region. Screenlines are pre-determined imaginary lines spanning municipal boundaries, man-made boundaries (such as railways or roads) and natural boundaries (such as rivers) where knowledge of travel patterns and characteristics would be useful for planning purposes. The York Region Cordon Count screenlines are shown in Figure 1. The surveys are conducted by measuring the total traffic volume on an average weekday, classified by type of vehicle and occupancy. The classifications are as follows:

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

All day counts, defined as 12-hour counts (7:00 AM – 7:00 PM), were conducted on weekdays (excluding Fridays) during the months of May and June. This provides a strategic snapshot of travel behaviour and changes in travel patterns across the

north/central part of the Greater Toronto Area, and is done in coordination with the Regions of Durham and Peel and the City of Toronto who conduct their counting program at the same time.

Figure 1



Interim Cordon Count Conducted in 2009

Full cordon counts are conducted every five years and are timed to coincide with other monitoring programs such as the GTA-wide Transportation Tomorrow Survey (TTS) and the Federal Statistics Canada Census. The last full cordon count was conducted in 2006.

With York Region's rapid growth, interim monitoring is required more frequently than every five years. The data collected in 2009 are compared to the 2006 counts along the screenlines.

The raw data from the 2009 counts are stored at a central repository at the University of Toronto together with data from previous years' count programs. Together with the time-series data from other participating regional municipalities across the GTA, the cordon count database is an important source of travel data that is used by municipalities, the Province, transportation consultants and academics for various transportation studies and analysis.

4. ANALYSIS AND OPTIONS

The Cordon Count Bulletin provides a summary of the analysis conducted

Analysis of the 2009 data is summarised in the 2009 Cordon Count Bulletin (*Council Attachment 1*).

The bulletin shows the change in traffic that has taken place between the years 2006 and 2009. A summary of the results for the all day period (between 7:00 AM – 7:00 PM), the morning period (between 6:30 AM – 9:30 AM), and the afternoon peak period (between 3:30 PM – 6:30 PM) are presented.

A detailed schematic map showing the location of each of the screenlines referred to in this report is also shown in the summary bulletin.

Highlights of the Cordon Count Bulletin are listed below

- Population and employment in the Region increased by approximately 10% and 8% respectively between 2006 and 2009 resulting in corresponding increases in traffic throughout the Region.
- All the screenlines experienced growth in all day vehicle trips with growth ranging between 2.3% of the Simcoe screenline to 15.3% across the Highway 404 screenline.
- All day person trips across all screenlines continued to grow between 2006 and 2009. This growth ranged between 2% at Simcoe cordon and 16% at the Durham boundary and Highway 404 Screenline. Highway 407 accounted for 41% of the traffic crossing the Peel Boundary and 26% of the traffic crossing the Durham Boundary.
- Average all day car occupancy rates have increased in almost all areas in reverse to the prolonged trend of the past. A number of factors may have contributed to this change including economic factors such as the economic recession, the cost of fuel, as well as programs that encourages carpooling such as Smart Commute.
- All day transit modal share has stayed roughly constant across all screen lines with increases and decreases of less than 1%. However, all day transit ridership has improved, particularly in the north-south travel direction where ridership growth has outpaced population growth.
- In 2009, the Provincial 400-series highways carried approximately 39% of all traffic into and out of the Region, an increase of 1% over the 2006 levels.

- Peak period traffic continues to increase despite high congestion levels at the Toronto boundary. South bound and north bound person trips crossing the Toronto boundary increased at the same rate of about 10% (20,100 trips in the SB direction and 13,800 trips in the NB direction) during the morning peak period.
- In terms of total person trips, travel across the Toronto boundary is the most significant with almost $\frac{3}{4}$ (74%) of all person trips crossing York Region's boundary going through the Toronto screenline.
- Percent of truck traffic declined across all screenlines except at the East Gwillimbury cordon.

These changes or lack of change in travel patterns are likely caused by one or more of the following factors:

- Population and employment growth.
- Increases in gasoline prices.
- Improvement in transit service in York Region.
- Programs promoting sustainable transportation options such as Smart Commute.

5. FINANCIAL IMPLICATIONS

The 2009 Cordon Count Program cost \$50,000 to conduct with \$20,000 recovered from the Province.

6. LOCAL MUNICIPAL IMPACT

Each local municipality will have access to the data base for use in their Transportation Planning and Operation programs.

The Cordon Count Bulletin will be placed on the York Region website while the detailed traffic database can be accessed through the University of Toronto website at www.dmg.utoronto.ca.

7. CONCLUSION

A trend analysis of travel pattern is presented in the Cordon Count Bulletin.

Major conclusions of the 2009 analysis show that vehicular traffic and person trips continue to grow between 2006 and 2009, with person trips growing faster than vehicular traffic. The result is that car occupancy rates have increased at all screenlines.

The travel interaction between York Region and Toronto is the most significant with almost three-quarters of all person trips crossing York Region's boundary going through the Toronto screenline. The data also indicates that York Region continues to do well in increasing transit modal share for north-south travel, particularly across the Toronto screenline.

Consistent, comprehensive and accurate data on vehicle and person trips are an essential component in support of the Region's planning and transportation initiatives. The transportation data from this and earlier studies are available in more detailed form for historical and site specific traffic analysis. This information is used extensively for research and planning studies by area municipalities across the GTA, GO Transit, the Province, universities and planning and engineering firms.

For more information on this report, please contact Omeed El-Zabet, Transportation Engineer, at 905-830-4444, Ext 5028 or Loy Cheah, Director, Infrastructure Planning at Ext. 5024.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the December 2, 2009 Committee meeting).

1. HIGHLIGHTS

The Regional Municipality of York has been witnessing substantial growth since the last full cordon count that was conducted in 2006. The Region's population has grown from 929,950 to 1,024,646 (10%), and employment has risen from 454,900 to 490,000 (8%), between 2006 and 2009. Recently, the Region has embarked on aggressive transit initiatives to address growing auto travel demands and move towards sustainability. Cordon count surveys, conducted every five years and interim years like this 2009 count, are needed to gauge the travel impacts of growth and changes in travel trends. This bulletin provides summaries of inter-regional and inter-municipal travel characteristics.



Exhibit 1: 2009 York Region Screenlines

Purpose

A cordon count is the periodic counting of persons and vehicles on all travel corridors crossing selected screenlines. Full cordon count surveys are conducted every five years and are timed to coincide with other programs such as the GTA wide Transportation Tomorrow Survey (TTS) and the Federal Statistics Canada Census. The last full cordon count was conducted in 2006. With York Region's rapid growth, monitoring is required more frequently than every five years resulting in an interim survey within the five year interval. The collected data is used to assess changes in transit use, vehicle occupancy rates, congestion levels, travel patterns and trends. The purpose of this bulletin is to report on the analysis and findings of the 2009 interim cordon count program.

"All day" 12-hour counts (7:00 AM - 7:00 PM) were taken during the months of May and June, on a typical weekday (excluding Fridays). The summary tables presented in this report include the peak periods (6:30 AM - 9:30 AM) and (3:30 PM - 6:30 PM). Records of the vehicle types and vehicle occupancy numbers were taken at 15-minute intervals. The following vehicle types were recorded:

- Passenger cars, taxis 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 others.

Cordon screenlines (Exhibit 1) are imaginary lines strategically located along natural or man-made barriers to travel, such as rivers or freeways. The York Region perimeter screenlines are used to monitor inter-regional traffic flow to and from York Region and the adjacent regions.

KEY HIGHLIGHTS FOR 2009

- All the screenlines experienced growth in all day vehicle trips, with growth ranging between 2.3% at the Simcoe screenline to 15.3% across the Highway 404 screenline as shown in Table 1.

Table 1: 2006 to 2009 Period Total Vehicle Change

Screenlines	Number of Vehicles		% Change	Number of Vehicles		% Change
	12-Hour Period			AM Peak Period		
	2006	2009		2006	2009	
Toronto Screenline	1,012,240	1,080,460	6.7	269,030	289,170	7.5
Peel Screenline	192,990	205,610	6.5	58,970	64,730	9.8
Durham Screenline	80,210	91,870	14.5	25,470	28,110	10.4
Simcoe Screenline	107,000	109,440	2.3	28,180	30,580	8.5
South York Screenline	277,210	300,220	8.3	82,820	86,310	4.2
Highway 400 Screenline	320,310	351,100	9.6	91,790	100,630	9.6
Highway 404 Screenline	321,450	370,660	15.3	91,860	99,520	8.3
East Gwillimbury Screenline	66,450	70,620	6.3	18,750	20,260	8.1
Ravenshoe Screenline	37,250	40,020	7.4	11,250	11,680	3.8

- All day person trips across all screenlines continued to grow between 2006 and 2009. This growth ranged between 2% at Simcoe cordon and 16% at the Durham boundary and Highway 404 Screenline as shown in Table 3. Highway 407 accounted for 41% of the traffic crossing the Peel Boundary and 26% of the traffic crossing the Durham Boundary.
- Average all day car occupancy rates have increased in almost all areas as shown in Table 2, in reverse to the prolonged trend of the past. A number of factors may have contributed to this change including economic factors such as the economic recession, fuel cost, as well as programs that promote carpooling like Smart Commute.
- All day transit modal share stayed roughly constant across all screenlines with increases and decreases of less than 1%. However, all day transit ridership has improved particularly in the north-south travel corridor.
- In 2009, the Provincial 400-series highways carried approximately 39% of all traffic into and out of the Region, an increase of 1% over the 2006 levels.

Table 2: 2006 to 2009 Average Car Occupancy Change

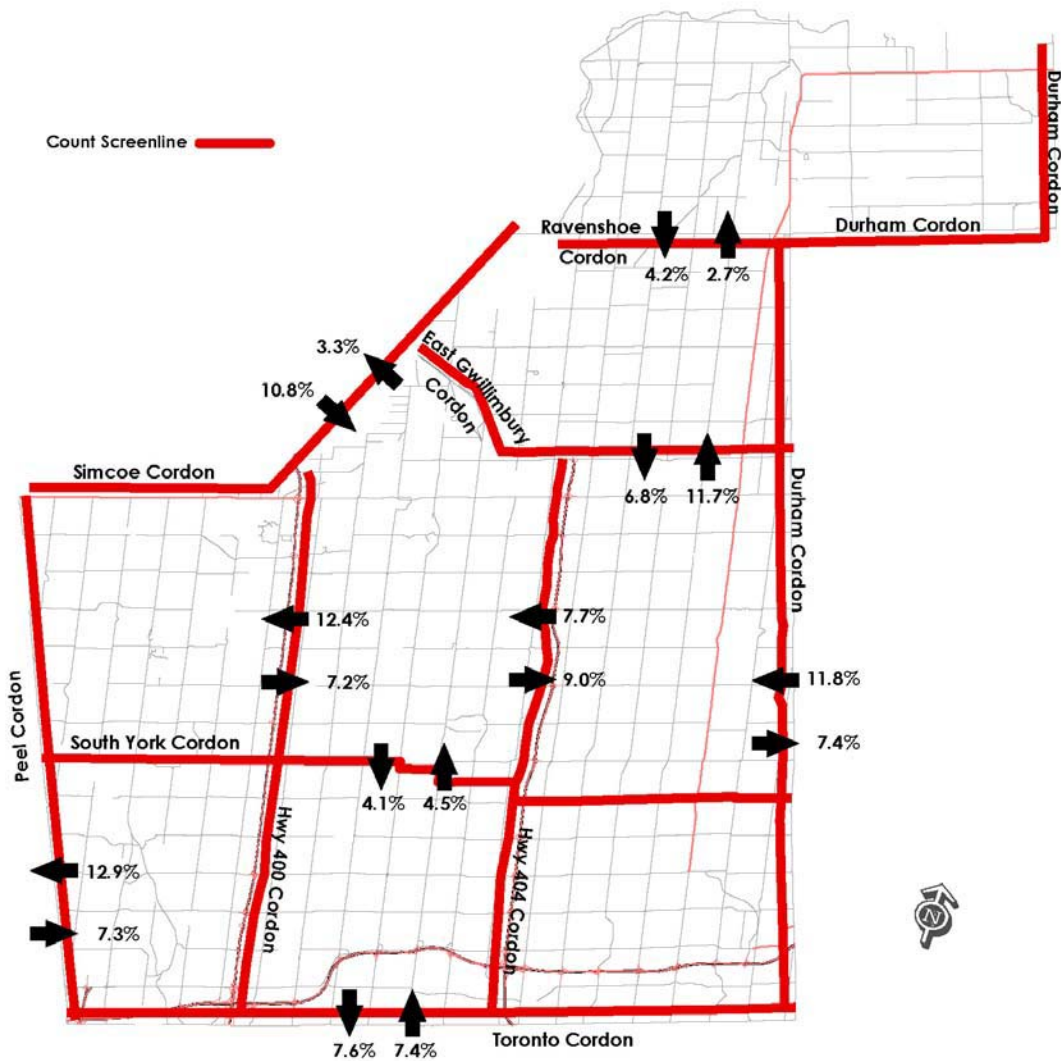
Screenline	Average Car Occupancy 12-Hour Period		Occupancy Rate Change
	2006	2009	
Toronto Screenline	1.16	1.18	0.02
Peel Screenline	1.12	1.17	0.05
Durham Screenline	1.16	1.18	0.02
Simcoe Screenline	1.16	1.17	0.01
South York Screenline	1.14	1.19	0.05
Highway 400 Screenline	1.13	1.14	0.01
Highway 404 Screenline	1.13	1.14	0.01
East Gwillimbury Screenline	1.17	1.17	0.00
Ravenshoe Screenline	1.20	1.28	0.08

- **T**able 1 and Exhibit 2 show the changes in traffic volumes in the AM peak period across all the screenlines. Peak period traffic continues to increase despite high congestion levels at the Toronto boundary. South bound and north bound person trips crossing the Toronto boundary increased at the same rate of about 10% (20,100 trips in the SB direction and 13,800 trips in the NB direction) during the morning peak period.
- **I**n terms of total person trips, travel across the Toronto boundary is the most significant with almost $\frac{3}{4}$ (74%) of all person trips crossing York Region's boundary going through the Toronto screenline.
- **P**ercent of truck traffic declined across all screenlines except at the East Gwillimbury cordon.

Table 3: Percent Change in Total Person Trips

Screenlines	Person Trips 12-Hour Period		% Change
	2006	2009	
Toronto Screenline	1,252,640	1,367,600	9.2
Peel Screenline	218,000	242,300	11.1
Durham Screenline	92,760	107,570	16.0
Simcoe Screenline	128,410	131,040	2.0
South York Screenline	329,930	368,440	12.0
Highway 400 Screenline	371,360	407,720	9.8
Highway 404 Screenline	371,350	432,010	16.3
East Gwillimbury Screenline	80,650	86,290	7.0
Ravenshoe Screenline	44,910	51,760	15.3

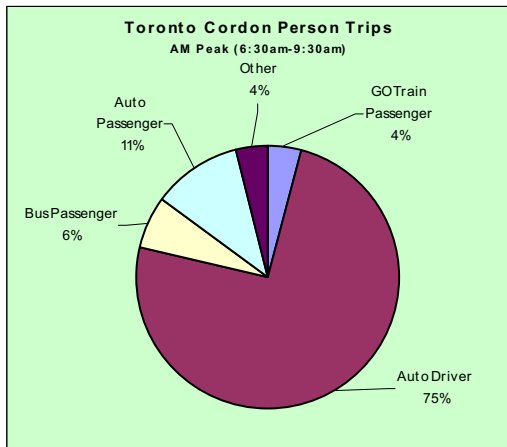
**Exhibit 2: Percent Change in A.M. Peak Period Traffic Flow
between 2006 and 2009**



2. RESULTS AND ANALYSIS OF SCREENLINE COUNTS

2.1 Toronto Cordon

The Toronto Cordon Screenline runs in an east-west direction along the north side of Steeles Avenue between Highway 50 in the west and York-Durham Line to the east. Counts along this line were conducted in partnership with the City of Toronto, which coordinated counts west of Yonge Street, while York Region counted the eastern section.



Toronto Cordon	2006	2009	Change 2006-2009
Total Vehicle trips (12 hour) Two Way	1,012,240	1,080,460	+6.7%
A.M. Peak 3-hour - NB	113,500	121,860	+7.4%
A.M. Peak 3-hour - SB	155,530	167,310	+7.6%
% Truck Usage (12 hour) Two Way	5.0%	4.9%	-0.1%
Total Person trips (12 hour) Two Way	1,252,640	1,367,600	+9.2%
A.M. Peak 3-hour - NB	137,430	152,170	+10.7%
A.M. Peak 3-hour - SB	195,830	215,920	+10.3%
Average Car Occupancy Two Way	People per vehicle		
A.M. Peak 3-hour	1.12	1.15	+0.03
P.M. Peak 3-hour	1.17	1.20	+0.03
12 hour	1.16	1.18	+0.02
Transit Usage Two Way			
A.M. Peak 3-hour	10.5%	10.6%	+0.1%
P.M. Peak 3-hour	8.8%	9.1%	+0.3%
12 hour	7.4%	7.9%	+0.5%

Table 4:
A.M. Transit Usage on Selected Roads along the York-Toronto Screenline

Screenline	% Transit Usage 12-Hour Period		% Change
	2006	2009	
Martin Grove N of Steeles	14	7	-7
Weston N of Steeles	7	5	-2
Jane N of Steeles	23	20	-3
Keele N of Steeles	13	18	5
Dufferin N of Steeles	4	8	4
Bathurst N of Steeles	12	17	5
Yonge Street N of Steeles	44	36	-8
Bayview N of Steeles	6	4	-2
Don Mills N of Steeles	11	9	-2
Victoria Park N of Steeles	6	18	12
Markham N of Steeles	5	3	-2

The Provincial highways (400, 427 and 404) carry 37% of the traffic crossing Steeles Avenue during the all day 12-hour period. In the three year period between 2006 and 2009, traffic increased by 6.7% or 68,220 two-way vehicular trips during the 12-hour period, with a growth of 7.4% in the northbound direction and 7.6% in the southbound, during the AM peak period. Total daily person trips have increased by 9.2%, which is generally a result of the increase in population and employment during the same period.

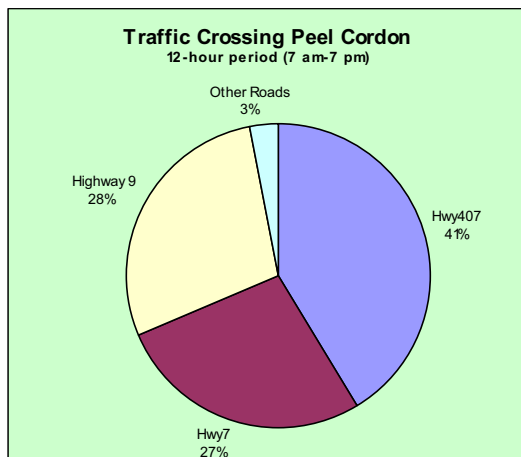
Transit usage in the AM peak period (Table 4) has shown a decrease in some of the roads crossing Steeles Avenue, but the 12 hour all day transit usage increased by 0.5%. This increase in Toronto's cross boundary all day transit usage has been due to

improved YRT services and the introduction of VIVA Bus Rapid Transit System which was launched in September 2005. Car occupancy rates have increased as well since the last Cordon Count conducted in 2006. In the AM peak period, for every 100 vehicles going south to Toronto, there are 73 vehicles going north to York Region. For the 12-hour period, the ratio increases to 100 southbound to 96 northbound vehicles.

2.2 Peel Cordon

The Peel cordon is the western boundary of York Region. High traffic growth was basically limited to three major roads: Highway 407, Highway 7, and Highway 9. Highway 407 played the major role in the traffic crossing the Peel boundary, carrying 41% of the total all day traffic in 2009.

Although total all day vehicular traffic increased by almost 7%, person trips increased 11%. This surge of person trips is reflected in an increase in the average car occupancy of 0.05 persons per vehicle. All day transit usage on Highway 407 dropped from 3% to 2% and on Highway 7 decreased from 4% to 2%.



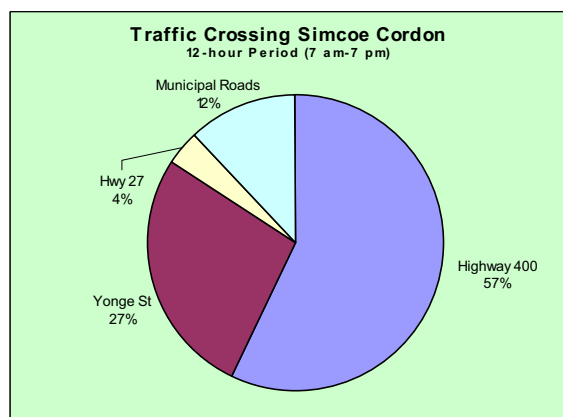
Peel Cordon	2006	2009	Change 2006-2009
Total Vehicle trips (12 hour) Two Way	192,990	205,610	+6.5%
A.M. Peak 3-hour - EB	33,020	35,430	+7.3%
A.M. Peak 3-hour - WB	25,950	29,300	+12.9%
% Truck Usage (12 hour) two way	10.8%	9.0%	-1.8%
Total Person trips (12 hour) Two Way	218,000	242,300	+11.1%
A.M. Peak 3-hour - EB	36,050	42,080	+16.7%
A.M. Peak 3-hour - WB	28,500	33,350	+17.0%
Average Car Occupancy Two Way	People per vehicle		
A.M. Peak 3-hour	1.08	1.15	+0.07
P.M. Peak 3-hour	1.14	1.18	+0.04
12 hour	1.12	1.17	+0.05
Transit Usage Two Way			
A.M. Peak 3-hour	2.5%	2.6%	+0.1%
P.M. Peak 3-hour	2.5%	1.6%	-0.9%
12 hour	2.6%	1.9%	-0.7%

2.3 Simcoe Cordon

Person trips crossing the York-Simcoe boundary during the 12-hour all day period increased by 2% (about 2,630 person trips). This was the lowest growth rate of all the screenlines surveyed. There was a small increase in the average car occupancy; the 2009 survey indicates an increase in the all day level from 1.16 to 1.17 people per vehicle. When the Region first started the cordon count program in the mid-eighties, average car occupancy rates here were over 1.4 people per vehicle.

The percentage of travel by transit shows an increase in the PM peak only, while the proportion of all day transit usage has dropped from 5.0% in 2006 to 3.9% in 2009. Total vehicle trips during the 12-hour period have increased by 2% between 2006 and 2009, or 2,440 trips.

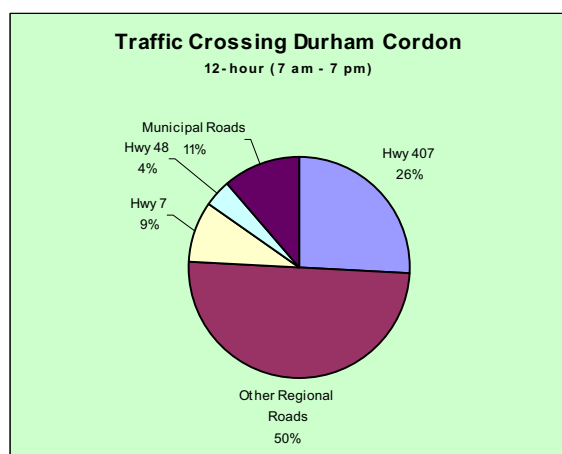
Highway 400 still carries the bulk of vehicular all day traffic, 57% of the total, followed by Yonge Street carrying 27%, and Highway 27 carrying 4%. Truck usage decreased by 1% over the same period.



Simcoe Cordon	2006	2009	Change 2006-2009
Total Vehicle trips (12 hour) Two Way	107,000	109,440	+2.3%
A.M. Peak 3-hour - NB	8,570	8,850	+3.3%
A.M. Peak 3-hour - SB	19,610	21,730	+10.8%
% Truck Usage (12 hour) Two Way	8.1%	7.1%	-1.0%
Total Person trips (12 hour) Two Way	128,410	131,040	+2.0%
A.M. Peak 3-hour - NB	9,620	9,620	No change
A.M. Peak 3-hour - SB	22,520	25,500	+13.2%
Average Car Occupancy Two Way	People per vehicle		
A.M. Peak 3-hour	1.10	1.11	+0.01
P.M. Peak 3-hour	1.17	1.18	+0.01
12 hour	1.16	1.17	+0.01
Transit Usage Two Way			
A.M. Peak 3-hour	4.6%	4.4%	-0.2%
P.M. Peak 3-hour	2.9%	3.9%	+1.0%
12 hour	5.0%	3.9%	-1.1%

2.4 Durham Cordon

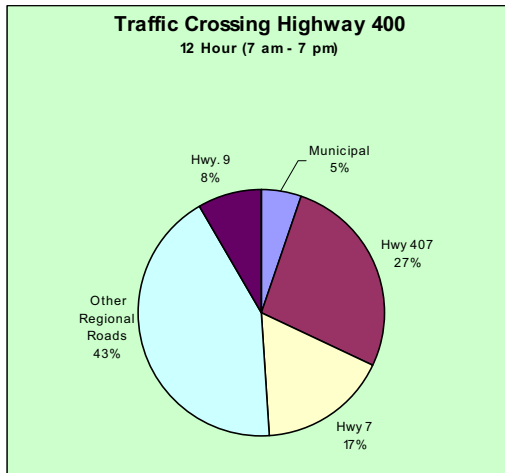
At the York-Durham boundary, there has been about a 15% increase in all day traffic. Highway 407 carries 26% of all day commuter traffic into Durham Region and Highway 7 carries 9% of the all day traffic. All day person trips have increased by 16% as a result of increases in the average car occupancy. However, there was a decline in the overall transit modal share between 2006 and 2009 of 0.1%. All day truck traffic also decreased by 0.7% between the years 2006 and 2009.



Durham Cordon	2006	2009	Change 2006-2009
Total Vehicle trips (12 hour) Two Way	80,210	91,870	+14.5%
A.M. Peak 3-hour - EB	8,140	8,740	+7.4%
A.M. Peak 3-hour - WB	17,330	19,370	+11.8%
% Truck Usage (12 hour) Two Way	8.1%	7.4%	-0.7%
Total Person trips (12 hour) Two Way	92,760	107,570	+16.0%
A.M. Peak 3-hour - EB	9,360	9,900	+5.8%
A.M. Peak 3-hour - WB	18,610	21,500	+15.5%
Average Car Occupancy Two Way	People per vehicle		
A.M. Peak 3-hour	1.09	1.11	+0.02
P.M. Peak 3-hour	1.18	1.19	+0.01
12 hour	1.16	1.18	+0.02
Transit Usage Two Way			
A.M. Peak 3-hour	2.0%	1.8%	-0.2%
P.M. Peak 3-hour	0.7%	0.8%	+0.1%
12 hour	1.1%	1.0%	-0.1%

2.5 Highway 400 Cordon

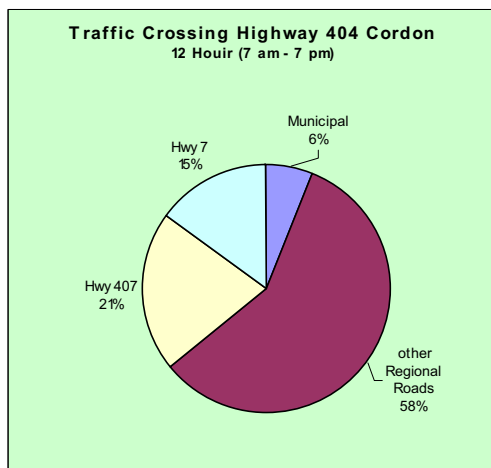
All day traffic crossing Highway 400 cordon has increased by almost 10% or 30,790 trips between 2006 and 2009. A major role is now played by Highway 407 which carries 27% of the total 12-hour traffic crossing this screenline. Transit ridership dropped by 0.5% in the 12 hour period, this may be, in part, because of the increase in average car occupancy value of 0.01 people/vehicle and economic factors.



Highway 400 Cordon	2006	2009	Change 2006-2009
Total Vehicle trips (12 hour) Two Way	320,310	351,100	+9.6%
A.M. Peak 3-hour - EB	48,890	52,420	+7.2%
A.M. Peak 3-hour - WB	42,900	48,210	+12.4%
% Truck Usage (12 hour) Two Way	7.8%	7.3%	-0.5%
Total Person trips (12 hour) Two Way	371,360	407,720	+9.8%
A.M. Peak 3-hour - EB	56,010	59,420	+6.1%
A.M. Peak 3-hour - WB	48,060	54,790	+14.0%
Average Car Occupancy Two Way	People per vehicle		
A.M. Peak 3-hour	1.10	1.10	No change
P.M. Peak 3-hour	1.15	1.15	No change
12 hour	1.13	1.14	+0.01
Transit Usage Two Way			
A.M. Peak 3-hour	4.5%	3.7%	-0.8%
P.M. Peak 3-hour	4.1%	3.9%	-0.2%
12 hour	4.0%	3.5%	-0.5%

2.6 Highway 404 Cordon

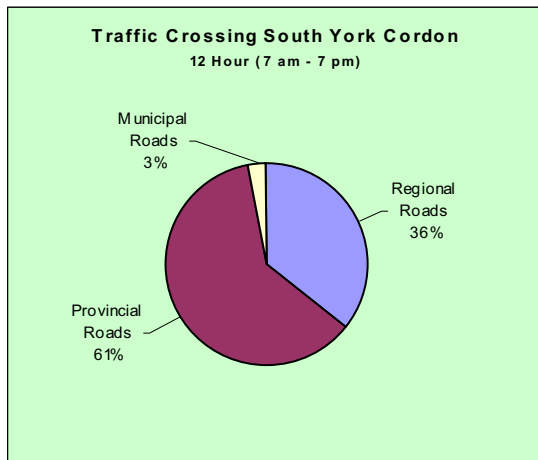
The traffic count conducted at this cordon show a growth of 15.3% in total vehicle trips during the 12-hour count period. Total person trips increased by 16.3%, while transit usage dropped by 0.1%. Car occupancy increased by 0.01 people per vehicle over the same period. Highway 407 carried 21% of the total all day traffic crossing the screenline and Highway 7 carried 15% of all day traffic.



Highway 404 Cordon	2006	2009	Change 2006-2009
Total Vehicle trips (12 hour) Two Way	321,450	370,660	+15.3%
A.M. Peak 3-hour - EB	45,460	49,550	+9.0%
A.M. Peak 3-hour - WB	46,400	49,970	+7.7%
% Truck Usage (12 hour) Two Way	5.3%	4.5%	-0.8%
Total Person trips (12 hour) Two Way	371,350	432,010	+16.3%
A.M. Peak 3-hour - EB	51,870	56,840	+9.6%
A.M. Peak 3-hour - WB	51,620	57,360	+11.1%
Average Car Occupancy Two Way	People per vehicle		
A.M. Peak 3-hour	1.10	1.11	+0.01
P.M. Peak 3-hour	1.15	1.16	+0.01
12 hour	1.13	1.14	+0.01
Transit Usage Two Way			
A.M. Peak 3-hour	3.6%	4.2%	+0.6%
P.M. Peak 3-hour	2.7%	2.4%	-0.3%
12 hour	2.9%	2.8%	-0.1%

2.7 South York Cordon

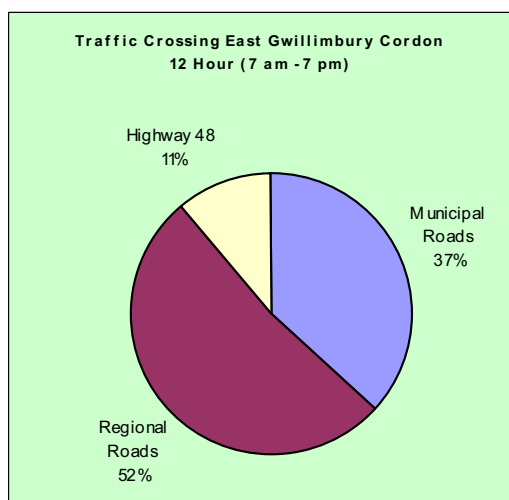
The count at this station was conducted to monitor changes to north-south traffic within York Region. A growth of 8.3% in total vehicles in a 12 hour day between the years 2006 and 2009 was observed. Total person trips increased by 12.0% while there was a decline in transit usage of 0.5% in the 12 hour period. There was a small increase of 0.05 persons per vehicle over the same period.



South York Cordon	2006	2009	Change 2006-2009
Total Vehicle trips (12 hour) Two Way	277,210	300,220	+8.3%
A.M. Peak 3-hour - NB	24,440	25,550	+4.5%
A.M. Peak 3-hour - SB	58,380	60,760	+4.1%
% Truck Usage (12 hour) Two Way	6.7%	6.4%	-0.3%
Total Person trips (12 hour) Two Way	329,930	369,440	+12.0%
A.M. Peak 3-hour - NB	28,110	31,060	+10.5%
A.M. Peak 3-hour - SB	68,480	73,970	+8.0%
Average Car Occupancy Two Way	People per vehicle		
A.M. Peak 3-hour	1.10	1.15	+0.05
P.M. Peak 3-hour	1.16	1.19	+0.03
12 hour	1.14	1.19	+0.05
Transit Usage Two Way			
A.M. Peak 3-hour	7.3%	7.2%	-0.1%
P.M. Peak 3-hour	5.7%	6.3%	+0.6%
12 hour	5.7%	5.2%	-0.5%

2.8 East Gwillimbury Cordon

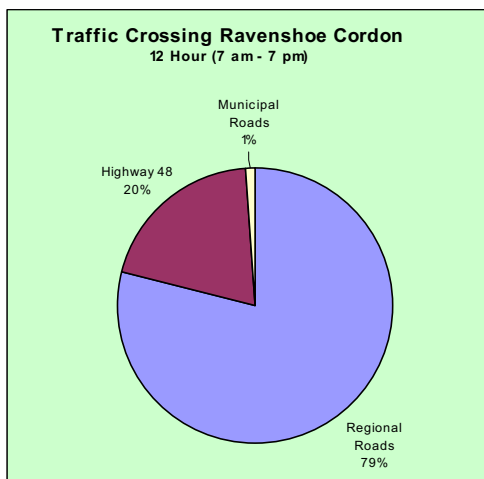
Between 2006 and 2009 there was a 6.3% growth in total all day vehicles crossing the East Gwillimbury cordon line. Most of this traffic was handled on the Regional road system which totalled 52%. There was an increase of 7% in person trips over a period of 12 hours; this was almost the same as the growth of the total vehicles. Auto occupancy rates remained constant across this cordon.



East Gwillimbury Cordon	2006	2009	Change 2006-2009
Total Vehicle trips (12 hour) Two Way	66,450	70,620	+6.3%
A.M. Peak 3-hour - NB	4,720	5,270	+11.7%
A.M. Peak 3-hour - SB	14,030	14,990	+6.8%
% Truck Usage (12 hour) Two Way	4.1%	4.3%	+0.2%
Total Person trips (12 hour) Two Way	80,650	86,290	+7.0%
A.M. Peak 3-hour - NB	5,480	6,080	+10.9%
A.M. Peak 3-hour - SB	17,400	18,560	+6.7%
Average Car Occupancy Two Way	People per vehicle		
A.M. Peak 3-hour	1.12	1.12	No change
P.M. Peak 3-hour	1.16	1.17	+0.01
12 hour	1.17	1.17	No change
Transit Usage Two Way			
A.M. Peak 3-hour	10.0%	9.9%	-0.1%
P.M. Peak 3-hour	3.7%	5.5%	+1.8%
12 hour	5.3%	5.9%	+0.6%

2.9 Ravenshoe Cordon

This is the most northerly screenline in the Region. In the period between 2006 and 2009 there was a 7.4% increase in traffic in the 12 hour period. Person trips were increased by 15.3%. There was a slight increase of 0.3% in the proportion of transit usage, truck usage dropped by 1.3%. There has been an overall increase in the average car occupancy rates across this screenline; this could be due to the continuous escalation of gasoline prices and the downturn in the economy.



Ravenshoe Cordon	2006	2009	Change 2006-2009
Total Vehicle trips (12 hour) Two Way	37,250	40,020	+7.4%
A.M. Peak 3-hour - NB	2,640	2,710	+2.7%
A.M. Peak 3-hour - SB	8,610	8,970	+4.2%
% Truck Usage (12 hour) Two Way	5.4%	4.1%	-1.3%
Total Person trips (12 hour) Two Way	44,910	51,760	+15.3%
A.M. Peak 3-hour - NB	3010	3,390	+12.6%
A.M. Peak 3-hour - SB	9,750	10,970	+12.5%
Average Car Occupancy Two Way	People per vehicle		
A.M. Peak 3-hour	1.14	1.23	+0.09
P.M. Peak 3-hour	1.21	1.26	+0.05
12 hour	1.20	1.28	+0.08
Transit Usage Two Way			
A.M. Peak 3-hour	1.4%	1.8%	+0.4%
P.M. Peak 3-hour	2.5%	2.5%	No change
12 hour	2.2%	2.5%	+0.3%

3. TRAVEL CHARACTERISTICS

3.1 400 SERIES HIGHWAYS

The 400 series Provincial highway system plays a major role in handling car and truck traffic through the Region. The system handles approximately 39% of all traffic entering and leaving the Region.

Highway 407 continues to play a major role in affecting travel patterns in the southern part of York Region. It now carries 26% of all traffic or about 23,680 vehicles to and from the east at York-Durham boundary during the 12-hour 7:00 am–7:00 pm weekday period. Highway 407 at the York-Peel boundary handled 84,900 vehicles during the 12-hour week day period or 41% of the total.

To the south, the combination of Highways 400, 404 and 427 handle approximately 37% of total traffic crossing to and from Toronto. To the north, Highway 400 handles 57% of total traffic. In all cases the 400 series highways carry the bulk of all heavy truck traffic crossing each boundary.

3.2 AUTO OCCUPANCY

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. Twenty years ago counts showed average auto occupancy levels at 1.26 to 1.43 persons per vehicle on an all day basis crossing York's boundaries, compared to 1.14 to 1.28 in 2009. Table 5 summarizes the difference in auto occupancy over the 2006 to 2009 period at each screenline for the 12-hour span and during the AM peak and PM peak periods. In the three year period between 2006 and 2009, there has generally been an increase in car occupancy rates.

Table 5: Average Auto Occupancy by Screenlines

Screenlines	Average 12-hour		Difference	Average AM 3-hour		Difference	Average PM 3-hour		Difference
	Auto Occupancy			Auto Occupancy			Auto Occupancy		
	2006	2009		2006	2009		2006	2009	
Toronto Screenline	1.16	1.18	0.02	1.12	1.15	0.03	1.17	1.20	0.03
Peel Screenline	1.12	1.17	0.05	1.08	1.15	0.07	1.14	1.18	0.04
Durham Screenline	1.16	1.18	0.02	1.09	1.11	0.02	1.18	1.19	0.01
Simcoe Screenline	1.16	1.17	0.01	1.10	1.11	0.01	1.17	1.18	0.01
South York Screenline	1.14	1.19	0.05	1.10	1.15	0.05	1.16	1.19	0.03
Highway 400 Screenline	1.13	1.14	0.01	1.10	1.10	No change	1.15	1.15	No change
Highway 404 Screenline	1.13	1.14	0.01	1.10	1.11	0.01	1.15	1.16	0.01
East Gwillimbury Screenline	1.17	1.17	No change	1.12	1.12	No change	1.16	1.17	0.01
Ravenshoe Screenline	1.20	1.28	0.08	1.14	1.23	0.09	1.21	1.26	0.05

3.3 TRUCK TRAFFIC

Truck counts include medium and heavy vehicles only. Commercial cars, vans and pickups are excluded in this category. The large vehicles categorised as trucks have a significant effect on roadway capacity and the structural conditions of Regional roads, because of its equivalent size and weight. The percentage of total traffic that trucks represent has dropped in almost all the screenlines except at East Gwillimbury (Table 6). The greatest decrease of 1.8% was at York-Peel Boundary and is significant because of the CP Intermodal rail-truck yard situated at this location. The decline in truck traffic is very likely related to the global economic recession.

Table 6: Percent (12-Hour) Truck Ratio at Screenlines

Screenlines	12- Hour % Trucks		% Difference
	2006	2009	
Toronto Screenline	5.0	4.9	-0.1
Peel Screenline	10.8	9.0	-1.8
Durham Screenline	8.1	7.4	-0.7
Simcoe Screenline	8.1	7.1	-1.0
South York Screenline	6.7	6.4	-0.3
Highway 400 Screenline	7.8	7.3	-0.5
Highway 404 Screenline	5.3	4.5	-0.8
East Gwillimbury Screenline	4.1	4.3	0.2
Ravenshoe Screenline	5.4	4.1	-1.3

Truck volumes in total remain roughly constant over the three year period between 2006 and 2009. However, as a percentage of the total vehicular volume it has dropped. Possible explanation may be the global recession, hence less demand for manufactured goods. The redistribution of truck movement locations has changed the delivery route patterns across the Regional screenlines.

3.4 TRANSIT MODAL SHARE

All day transit modal share stayed roughly constant across all screenlines with increases and decreases of less than 1% as shown in Table 7. However, all day transit ridership has improved particularly in the north-south travel direction. Transit use includes trips on York Region Transit, VIVA, GO Transit, TTC, school and other buses.

Transit ridership appears to have increased at a reasonable rate and is particularly significant in the north-south travel corridor where it has increased at a rate higher than population growth. The most critical screenline in relation to transit modal share is the Toronto screenline where transit share has increased, bucking the trend elsewhere, and likely reflecting the continued investment in YRT/VIVA services over the last four years.

As shown in Table 8, in the east-west travel direction, there is a decline in transit ridership occurring in the western part of Vaughan. This decrease may be a reflection of the decline in the manufacturing and industrial sector of the economy. However, increases in transit ridership in other parts to the east at the Hwy 404 screenline is at a healthy 9%. Increases in east-west transit ridership may not be as significant as it should be since some of the critical ridership numbers are captured in the north-south travel direction as noted below.

In the north-south direction, the barometer is the Toronto screenline where transit ridership increases by 17%. Some of that increase is from the change to the VIVA Purple and Orange lines running along Highway 7 which are generally east-west transit routes that turn north-south as they approach York University and is therefore captured in the Toronto screenline numbers.

Table 7: Percent Change in Transit Usage

Screenlines	Average 12-Hour		%	Average AM 3-Hour		%	Average PM 3-Hour		%
	% Transit Usage		Change	% Transit Usage		Change	% Transit Usage		Change
	2006	2009		2006	2009		2006	2009	
Toronto Screenline	7.4	7.9	0.5	10.5	10.6	+0.1	8.8	9.1	0.3
Peel Screenline	2.6	1.9	-0.7	2.5	2.6	0.1	2.5	1.6	-0.9
Durham Screenline	1.1	1.0	-0.1	2.0	1.8	-0.2	0.7	0.8	0.1
Simcoe Screenline	5.0	3.9	-1.1	4.6	4.4	-0.2	2.9	3.9	1.0
South York Screenline	5.7	5.2	-0.5	7.3	7.2	-0.1	5.7	6.3	0.6
Highway 400 Screenline	4.0	3.5	-0.5	4.5	3.7	-0.8	4.1	3.9	-0.2
Highway 404 Screenline	2.9	2.8	-0.1	3.6	4.2	0.6	2.7	2.4	-0.3
East Gwillimbury Screenline	5.3	5.9	0.6	10.0	9.9	-0.1	3.7	5.5	1.8
Ravenshoe Screenline	2.2	2.5	0.3	1.4	1.8	0.4	2.5	2.5	No change

Table 8: Percent Change in Transit Ridership
A Comparison between East-West and North-South Travel

East-West Travel						
Screenline	Transit Ridership Difference between 2006 and 2009			% Difference		
	12hr	AM Peak	PM Peak	12hr	AM Peak	PM Peak
York-Durham Screenline	61	0	73	6	0	33
York-Peel Screenline	-1,043	336	-387	-18	21	-24
Highway 400 Screenline	-838	-599	43	-6	-12	1
Highway 404 Screenline	980	833	56	9	21	2
Total	-839	570	-214	-3	5	-2
North-South Travel						
Screenline	Transit Ridership Difference between 2006 and 2009			% Difference		
	12hr	AM Peak	PM Peak	12hr	AM Peak	PM Peak
York-Simcoe Screenline	-1,340	94	510	-21	6	44
York-Toronto Screenline	15,584	4,230	5,747	17	12	17
South York Screenline	355	571	1,230	2	8	20
East Gwillimbury Screenline	810	152	426	19	7	43
Ravenshoe Screenline	297	82	62	31	48	17
Total	15,707	5,129	7,976	13	11	19

4. FINAL NOTE

The significant development growth in York Region is planned to continue, but there are limited opportunities to increase the road capacity in the built up areas of the Region. Accommodating continued growth will require an aggressive effort to provide further measures and initiatives to reduce travel demand and to increase use of alternative modes such as transit, carpooling, cycling and walking.

In an effort to reduce the impact of this growth, the Region has implemented its bold rapid transit initiative in York Region (VIVA). The first phase of VIVA was launched in September 2005, which shifted some commuter trips from cars to public transit. In 2009, York Region received funding from the Provincial and Federal governments to implement Viva Next, the second phase of its Rapid Transit strategy, which will implement dedicated bus-lanes on Highway 7, Yonge Street and Davis Drive. In addition, construction has begun on extending the Spadina Subway from Downsview Station to Jane and Highway 7 in York Region. The Region is also implementing High Occupancy Vehicle (HOV) lanes to increase auto occupancy rates, and bicycle lanes to encourage cycling.

To reduce travel demand further, municipal governments of the Greater Toronto and Hamilton Area have partnered with Metrolinx (formerly known as the Greater Toronto Transportation Authority) in delivering the Smart Commute program. Started in 2005, Smart Commute is delivering transportation demand management programs and services through a central Smart Commute Association, operated by Metrolinx, and local Transportation Management Associations (TMAs).

Smart Commute partners with employers to provide commuting options and alternative work arrangements to employees, including carpooling, transit incentives, flex time, and telecommuting.

The 2009 Cordon Count demonstrated that these efforts along with other factors may be reducing the growth in single occupant vehicle trips; in 2009 there was a noticeable increase in vehicle occupancy rates across almost all screenlines.



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York Region produces a number of additional brochures and reports on transportation that are available to the public in person or via the York Region web site:

www.york.ca