2004 CORDON COUNT BULLETIN

December 2004

1. HIGHLIGHTS

- Since the last cordon count bulletin in 2001, the population in York Region has risen by 114,000 (15%) to 873,000 based on mid year population. Traffic has increased at all boundaries with the greatest traffic increases at York-Durham and York-Toronto screenlines.

- Subsequent to the 2001 Cordon Study, Highway 407 was extended into Pickering from Markham Road. As a result, traffic patterns at the boundary have changed. York-Durham traffic volumes have grown significantly in both directions by 31% overall, and traffic that crosses the York-Toronto Cordon line has increased by 13.5%.

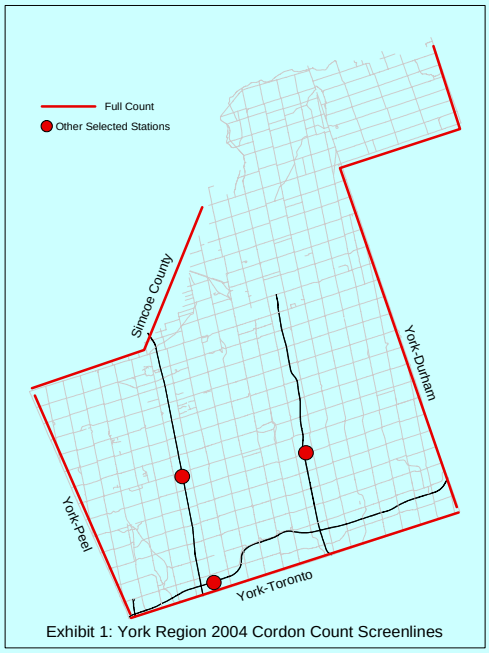


Exhibit 1: York Region 2004 Cordon Count Screenlines

Purpose

Cordon counts are conducted every 5 years and are timed to coincide with other programs such as the GTA wide Transportation Tomorrow Survey (TTS) and the Federal Statistics Canada Census. However, the rate of development growth in York Region requires an interim set of monitoring counts more frequent than every five years. The data collected can be used to assess changes in transit use, congestion levels and travel patterns.

The purpose of this bulletin, is to report on the findings of this interim count program in which only half of the screenlines - those at the boundary of the Region were counted along with a number of selected stations along Highways 400 and 404. A full cordon count program including both internal and boundary screenlines is planned for 2006.

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

- Passenger cars and cabs with 1, 2, 3 and more occupants
- Light, medium and heavy trucks
- York Region Transit (YRT), Brampton Transit, TTC, GO Transit and school buses

Cordon screenlines are usually located along natural or man-made barriers to travel, such as rivers or freeways. The perimeter screenlines were chosen to monitor inter-regional traffic flow to and from York Region and the adjacent regions.

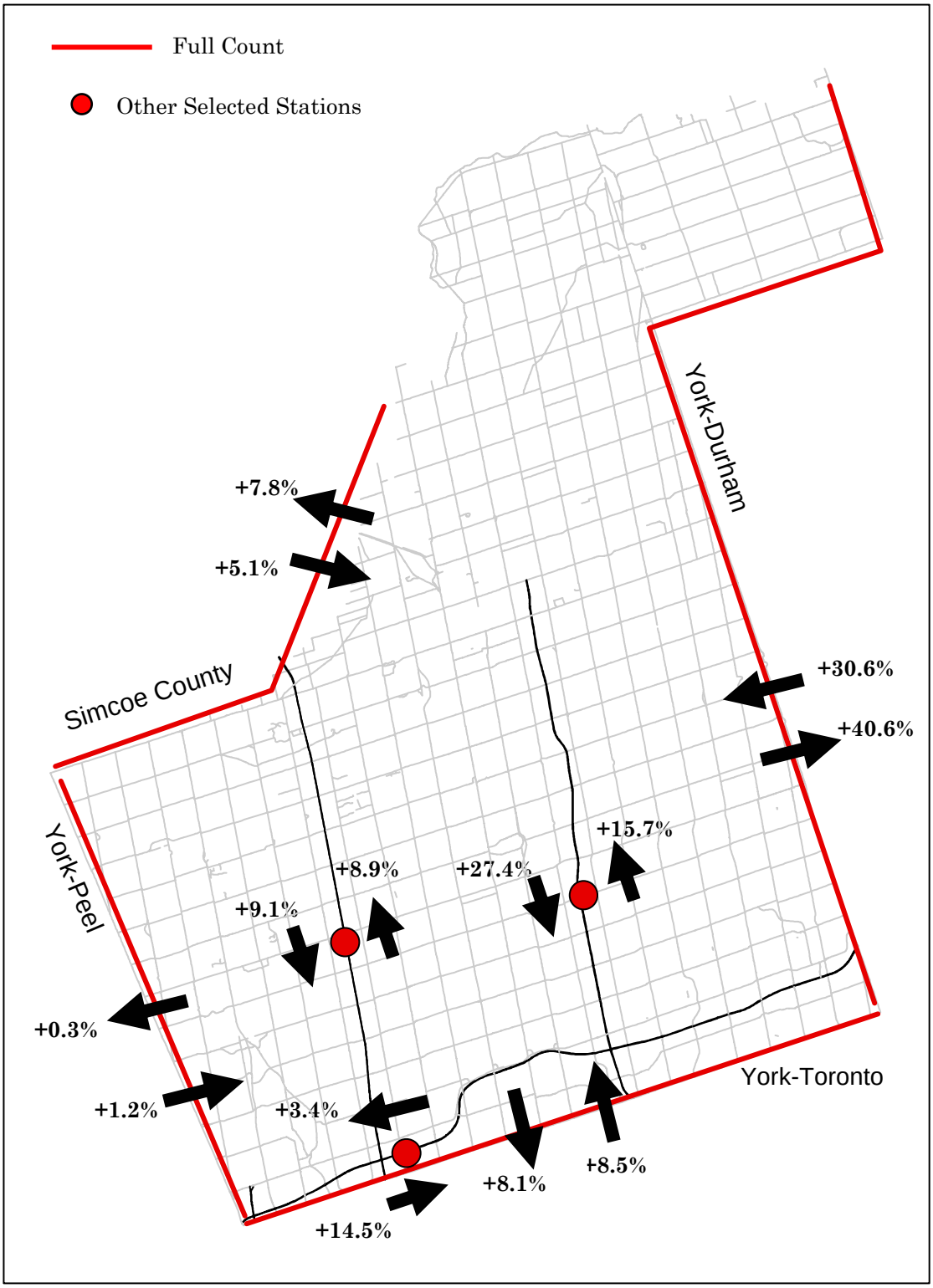
- Average car occupancy rates have increased slightly at the north, east and west boundaries, but the car occupancy at Steeles Avenue has continued to fall. However counts indicate that there was an increase in transit usage across all screenlines including Steeles Avenue where transit use increased by 2%. This is an encouraging trend, probably due in part to increasing gas prices and increasing congestion. Carpool initiatives, along with other Smart Commute programs, are being introduced throughout the GTA to further encourage increased car occupancy rates and transit ridership.

- Table 1 and Exhibit 2 show the changes in traffic volumes across the major screenlines. Despite high congestion levels at the York-Toronto boundary, peak period traffic continues to increase. Traffic crossing the Toronto, Durham and Simcoe boundaries in the reverse flow direction has increased faster than peak direction traffic.

Table 1: 2001 to 2004 Period Change

Screenlines	Number of Vehicles 12-Hour Period		% Change	Number of Vehicles AM Peak Period		% Change
	2001	2004	(3 years)	2001	2004	(3 years)
Full Screenline						
York-Toronto	910,990	1,033,500	+13.5%	252,270	273,090	+8.3%
York-Peel	169,510	183,280	+8.1%	50970	51390	+0.8%
York-Durham	61,790	80,970	+31.0%	18560	24710	+33.1%
York-Simcoe	86,200	89,250	+3.5%	24070	25480	+5.9%
400-Series Highways						
Highway 404 South of Stouffville Road	56,110	66,800	+19.1%	15750	19460	+23.6%
Highway 400 North of King-Vaughan Road	61,800	67,030	+8.5%	18450	20120	+9.1%
Highway 407 East of Highway 400	78,000	78,270	+0.4%	21470	23320	+8.6%

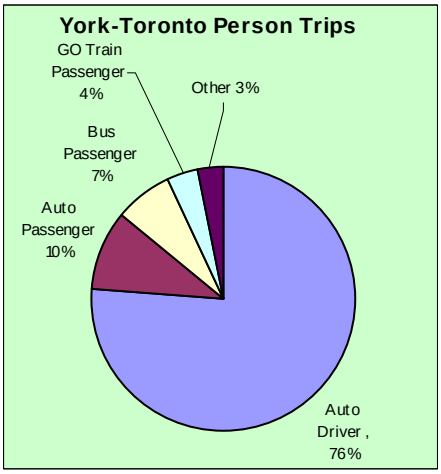
Exhibit 2: Percent Change in A.M. Peak Period Traffic Flow between 2001 and 2004



2. RESULTS AND ANALYSIS OF FULL SCREENLINE COUNTS

2.1. Toronto Boundary Screenline

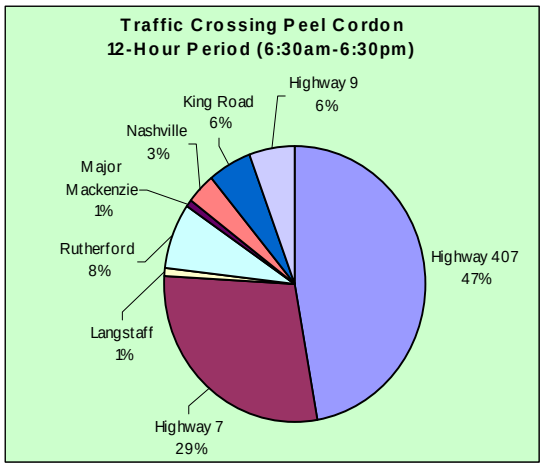
The Toronto Screenline runs along the north side of Steeles Avenue between Highway 50 to the west and York-Durham Line to the east. This count was done in partnership with the City of Toronto, which counted west of Yonge Street, and the Town of Markham which counted much of the eastern section. In the three year period between 2001 and 2004, there was an overall increase at this screenline of about 122,500 vehicles crossing the boundary in both directions during the 12-hour period (13.5%), with a growth of 8.5% in the northbound direction during the AM peak period. Total person trips have increased by 13.7%, which is generally in proportion to the increase in population and employment during the same period. Transit usage has shown a significant increase as well.



Toronto Cordon	2001	2004	Change 2001-2004
Total Vehicle trips (12 hour)	910,990	1,033,500	13.5%
A.M. Peak 3-hour - NB	105,180	114,130	8.5%
A.M. Peak 3-hour - SB	147,090	158,970	8.1%
% Truck Usage (12 hour)	6.0%	6.6%	0.6%
Total Person trips (12 hour)	1,099,770	1,249,950	13.7%
A.M. Peak 3-hour - NB	123,830	137,290	10.9%
A.M. Peak 3-hour - SB	177,440	195,160	10.0%
Average Car Occupancy			
A.M. Peak 3-hour	1.12	1.12	0.00
P.M. Peak 3-hour	1.18	1.16	-0.02
12 hour	1.16	1.14	-0.02
Transit Usage			
A.M. Peak 3-hour	8%	10%	2%
P.M. Peak 3-hour	6%	8%	2%
12 hour	5%	7%	2%

2.2. Peel Boundary Screenline

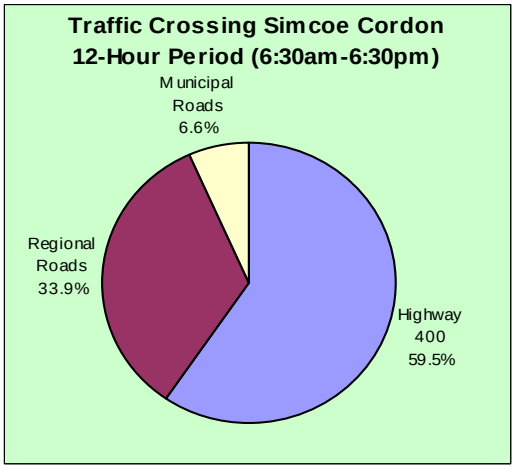
The Peel Screenline is the western boundary of York Region. In the period between 2001 and 2004 there has been an increase of 8.1% in vehicular traffic or 13,770 trips during the all day 12-hour period. Traffic volume growth occurred on most major roads along this screenline including Highway 407, Highway 7, Langstaff Road, Rutherford Road, Major Mackenzie Drive and King Road. However, a slight drop in traffic was noted on Highway 9. The all day increase of 9.5% in person trips during the same period is reflected in an increase in both transit usage of 1.5% and average car occupancy levels. There was also an increase of 1.1% in truck traffic.



Peel Cordon	2001	2004	Change 2001-2004
Total Vehicle trips (12 hour)	169,510	183,280	8.1%
A.M. Peak 3-hour - EB	28,890	29,240	1.2%
A.M. Peak 3-hour - WB	22,080	22,150	0.3%
% Truck Usage (12 hour)	11.0%	12.1%	1.1%
Total Person trips (12 hour)	188,520	206,490	9.5%
A.M. Peak 3-hour - EB	32,580	32,310	-0.8%
A.M. Peak 3-hour - WB	23,820	24,110	1.2%
Average Car Occupancy			
A.M. Peak 3-hour	1.10	1.09	-0.01
P.M. Peak 3-hour	1.11	1.12	0.01
12 hour	1.11	1.12	0.01
Transit Usage			
A.M. Peak 3-hour	2.0%	2.2%	0.2%
P.M. Peak 3-hour	1.0%	3.1%	2.1%
12 hour	1.0%	2.5%	1.5%

2.3. Simcoe Boundary Screenline

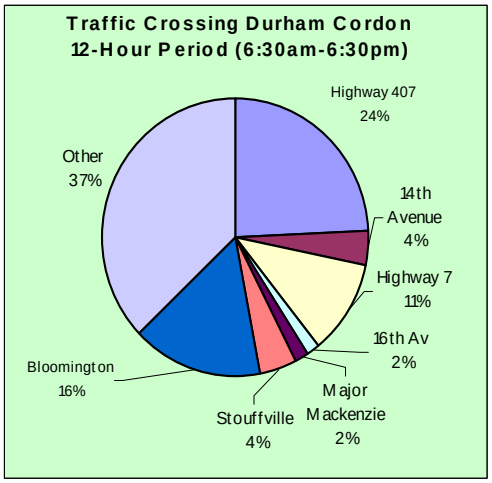
Although person trips crossing the York-Simcoe boundary have increased by 7.1% (about 3,000 trips), a significant increase in the average car occupancy rate as well as an increase in transit has meant that vehicle trips during the 12-hour period have only increased 3.5% over the 2001 to 2004 period. Highway 400 still carries the bulk of traffic - 59.5%, followed by Yonge Street carrying 29.4%, and finally Highway 27 with 4.5%.



Simcoe County Screenline	2001	2004	Change 2001-2004
Total Vehicle trips (12 hour)	86,200	89,250	3.5%
A.M. Peak 3-hour - NB	6,940	7,480	7.8%
A.M. Peak 3-hour - SB	17,130	18,000	5.1%
% Truck Usage (12 hour)	7%	7%	0.0%
Total Person trips (12 hour)	105,520	112,990	7.1%
A.M. Peak 3-hour - NB	8,470	9,130	7.8%
A.M. Peak 3-hour - SB	19,080	21,200	11.1%
Average Car Occupancy			
A.M. Peak 3-hour	1.11	1.15	0.04
P.M. Peak 3-hour	1.20	1.24	0.04
12 hour	1.19	1.22	0.03
Transit Usage			
A.M. Peak 3-hour	4.0%	4.6%	0.6%
P.M. Peak 3-hour	4.0%	4.3%	0.3%
12 hour	5.0%	5.1%	0.1%

2.4. Durham Boundary Screenline

At the York-Durham boundary, there has been a 31% increase in traffic. This increase is largely attributed to the extension of Highway 407 into Durham Region. Person trips have increased 33.5% as a result of increases in car occupancy and transit usage. Although there was an actual 15% increase in truck volume crossing the boundary, it was overshadowed by increases in redirected commuter traffic along Highway 407.



Durham Screenline	2001	2004	Change 2001-2004
Total Vehicle trips (12 hour)	61,790	80,970	31.0%
A.M. Peak 3-hour - EB	4,790	6,730	40.6%
A.M. Peak 3-hour - WB	13,770	17,980	30.6%
% Truck Usage (12 hour)	8.0%	7.0%	-1.0%
Total Person trips (12 hour)	70,970	94,730	33.5%
A.M. Peak 3-hour - EB	5,430	8,070	48.6%
A.M. Peak 3-hour - WB	15,340	20,180	31.5%
Average Car Occupancy			
A.M. Peak 3-hour	1.10	1.12	0.02
P.M. Peak 3-hour	1.16	1.18	0.02
12 hour	1.15	1.17	0.02
Transit Usage			
A.M. Peak 3-hour	3.0%	3.3%	0.3%
P.M. Peak 3-hour	2.0%	2.4%	0.4%
12 hour	2.0%	2.4%	0.4%

3. RESULTS AND ANALYSIS OF 400-SERIES HIGHWAYS

Since 2004 represents only an intermediate count in the five year cordon cycle, the screenlines within the Region were surveyed based on selecting only the major count stations along the 400 series highways.

3.1. Highway 404 South of Stouffville Road

The traffic count conducted at this station was compared with results obtained from the 2001 cordon counts. This highway count showed a growth of 19.1% in total vehicle trips during 12-hour count period which was directly due to population increases in Newmarket, Aurora, East Gwillimbury and Georgina as well as the widening of Highway 404 south of Wellington. Total person trips increased by 21.4%. Although transit use increased 1.6%, it remains less than half the level along Highway 400 because there is no through GO bus service.

Highway 404 S of Stouffville Road	2001	2004	Change 2001-2004
Total Vehicle trips (12 hour)	56,110	66,800	19.1%
A.M. Peak 3-hour - NB	5,220	6,040	15.7%
A.M. Peak 3-hour - SB	10,530	13,420	27.4%
% Truck Usage (12 hour)	8.9%	6.8%	-2.1%
Total Person trips (12 hour)	62,260	75,590	21.4%
A.M. Peak 3-hour - NB	6,090	7,470	22.7%
A.M. Peak 3-hour - SB	10,860	14,360	32.2%
Average Car Occupancy			
A.M. Peak 3-hour	1.06	1.09	0.03
P.M. Peak 3-hour	1.09	1.10	0.01
12 hour	1.09	1.10	0.01
Transit Usage			
A.M. Peak 3-hour	2.2%	4.0%	1.8%
P.M. Peak 3-hour	1.1%	3.9%	2.8%
12 hour	2.5%	4.1%	1.6%

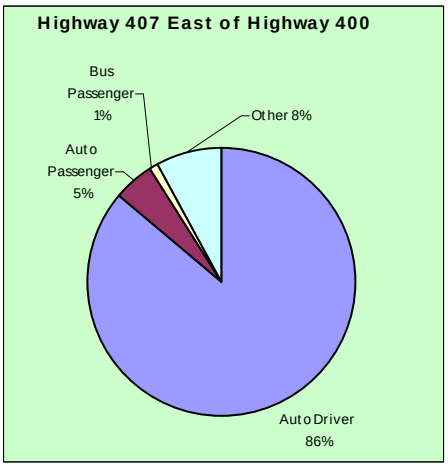
3.2. Highway 400 North of King-Vaughan Road

The count at this station was conducted to monitor changes to north-south traffic within York Region. A growth of 8.5% in total vehicles in a 12 hour day between the years 2001 and 2004 is observed. Due to declining average car occupancy levels, total person trips increased by only 6.9%, while transit usage only increased by 1.2%.

Highway 400 N of King-Vaughan	2001	2004	Change 2001-2004
Total Vehicle trips (12 hour)	61,800	67,030	8.5%
A.M. Peak 3-hour - NB	5,850	6,370	8.9%
A.M. Peak 3-hour - SB	12,600	13,750	9.1%
% Truck Usage (12 hour)	9.4%	8.9%	-0.5%
Total Person trips (12 hour)	77,560	82,870	6.9%
A.M. Peak 3-hour - NB	7,940	7,720	-2.8%
A.M. Peak 3-hour - SB	14,240	15,930	11.9%
Average Car Occupancy			
A.M. Peak 3-hour	1.16	1.11	-0.05
P.M. Peak 3-hour	1.13	1.14	0.01
12 hour	1.18	1.14	-0.04
Transit Usage			
A.M. Peak 3-hour	5.2%	7.0%	1.8%
P.M. Peak 3-hour	8.4%	10.5%	2.1%
12 hour	7.9%	9.1%	1.2%

3.3. Highway 407 East of Highway 400

In the period between 2001 and 2004 very little change in total vehicle and person flows occurred at this station. This neutral traffic situation at this location is caused in part by high traffic demand in the corridor matched by tolls on Highway 407 which maintain the 407 corporation's desired level of service.



Highway 407 East of Highway 400	2001	2004	Change 2001-2004
Total Vehicle trips (12 hour)	78,000	78,270	0.4%
A.M. Peak 3-hour - EB	10,100	11,560	14.5%
A.M. Peak 3-hour - WB	11,370	11,760	3.4%
% Truck Usage (12 hour)	8.9%	9.5%	0.6%
Total Person trips (12 hour)	88,100	84,760	-3.8%
A.M. Peak 3-hour - EB	10,850	12,110	11.6%
A.M. Peak 3-hour - WB	12,130	12,690	4.6%
Average Car Occupancy			
A.M. Peak 3-hour	1.07	1.06	-0.01
P.M. Peak 3-hour	1.17	1.08	-0.09
12 hour	1.14	1.08	-0.06
Transit Usage			
A.M. Peak 3-hour	0.3%	0.7%	0.4%
P.M. Peak 3-hour	0.5%	1.8%	1.3%
12 hour	0.4%	1.1%	0.7%

4. NOTABLE TRAVEL CHARACTERISTICS

4.1. TRUCK TRAFFIC

Truck counts are for medium and large sized vehicles only. Vans, pickups and commercial cars are excluded. These large vehicles have a significant effect on roadway capacity and the structural conditions of Regional roads and Provincial highways. Truck traffic increases have been observed throughout the Region – particularly along all of the 400 series highways and in the Peel boundary area where the Canadian Pacific truck/ rail intermodal yard is located. Although truck traffic has increased in a couple of corridors, it has generally kept pace with increases in general traffic demand.

Table 2: Percent Truck Ratio at York Region Boundaries

Screenlines	Trucks		Difference
	2001	2004	
Full Cordon			
York-Toronto	6.0%	6.6%	0.6%
York-Peel	11.0%	12.1%	1.1%
York-Durham	8.0%	7.0%	-1.0%
York-Simcoe	7.0%	7.0%	0.0%

4.2. AUTO OCCUPANCY

Even minor changes in the average level of car occupancy can have a significant effect on total traffic volume and on congestion levels. As a result these levels are monitored closely. Twenty years ago counts showed average levels at 1.26 to 1.43 on an all day basis crossing York's boundaries compared to 1.12 to 1.22 today. The continued decline has resulted in 15% to 30% more traffic than would have been the case in the past. There has been some growth in auto occupancy at most inter-regional screenlines, except for the York-Peel Cordon. Table 3 summarizes the difference in auto occupancy over the 2001 to 2004 period at each screenline for the 12-hour span and during the AM Peak and PM peak periods. In the three year period between 2001 and 2004, the highest increase was observed on Highway 407 west of Highway 404. This could be due to an increase in the proportion of longer trips due to the extension of the 407 into Durham Region.

Table 3: Average Auto Occupancy by Screenline

Screenlines	Average 12-hour Auto Occupancy		Difference	Average AM 3-hour Auto Occupancy		Difference	Average PM 3-hour Auto Occupancy		Difference
	2001	2004		2001	2004		2001	2004	
Full Cordon									
York-Toronto	1.16	1.14	-0.02	1.12	1.12	0.00	1.18	1.16	-0.02
York-Peel	1.11	1.12	0.01	1.10	1.09	-0.01	1.11	1.12	0.01
York-Durham	1.15	1.17	0.02	1.10	1.12	0.02	1.16	1.18	0.02
York-Simcoe	1.19	1.22	0.03	1.11	1.15	0.04	1.20	1.24	0.04

4.3. TRANSIT MODAL SHARE

Significant growth in transit ridership continues to occur. Transit use includes trips on York Region Transit, GO Transit, school and other buses. The biggest increase was at the York-Toronto screenline, which showed an increase of 2% during the A.M. peak period.

Table 4: Percent Change in Transit Usage

Screenlines	Average 12-Hour % Transit Usage		% Change	Average AM 3-Hour % Transit Usage		% Change	Average PM 3-Hour % Transit Usage		% Change
	2001	2004		2001	2004		2001	2004	
Full Cordon									
York-Toronto	5.0	7.0	2.0	8.0	10.0	2.0	6.0	8.0	2.0
York-Peel	1.0	2.5	1.5	2.0	2.2	0.2	1.0	3.1	2.1
York-Durham	2.0	2.4	0.4	3.0	3.3	0.3	2.0	2.4	0.4
York-Simcoe	5.0	5.1	0.1	4.0	4.6	0.6	4.0	4.3	0.3

4.4. HIGHWAY 407

Highway 407 continues to play a major part in affecting travel patterns in the southern part of York Region. Since the last Cordon Count in 2001, Highway 407 has been extended east from Markham Road to Highway 7 east of Brock Road and was extended west from Highway 410 to the Queen Elizabeth Way. Highway 407 crossing York-Durham Line carries approximately 16,000 vehicles during the 12-hour 6:30am-6:30pm week day period. Car occupancy along Highway 407 at the Durham boundary was 1.16 persons per vehicle and transit use was 2.9%. Highway 407 at the York-Peel boundary experienced 77,000 vehicles during the 12-hour week day period, car occupancy of 1.09 persons per vehicle and transit use of 1.4%. Highway 407 east of Highway 400 handled 78,000 vehicles during the same period, with car occupancy of 1.08 persons per vehicle and transit usage of 1.1%

5. FINAL NOTE

The strong development growth in York Region will likely continue, but there are limited opportunities to increase the road capacity in the built up areas beyond the program scheduled for the Region during the next decade. Accommodating continued growth will require an aggressive effort to further increase transit usage and car occupancy levels. In an effort to reduce the impact of this growth, the Region has embarked on a bold initiative, rapid transit in York Region (Viva). The first phase of Viva will begin service in the fall of 2005; this is expected to shift over 7,000 commuter trips per day from cars to public transit. This will be combined with a major effort to increase auto occupancy rates and reduce travel during the peak periods and throughout the day. Municipal governments of the Greater Toronto Area and Hamilton Region, with financial support from the Government of Canada, have embarked on a project to achieve these objectives. The Smart Commute Initiative will deliver transportation demand management programs and services through the Smart Commute Association and local Transportation Management Associations (TMA's). Work has already begun through the Smart Commute Association of Black Creek (SC-BC) and the Smart Commute 404-7 Association of Markham, Richmond Hill (404-7) TMAs.

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

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