Free data report example

Profession, Student

Executive Summary

The purpose of this discussion is to examine the travel and transit patterns in the Scarborough region of Toronto as well as in the Pickering region. This report gives a basic demographic overview of travel and transit patterns in the regions, and makes suggestions regarding the nature of expanding public transit and reducing the number of cars on the road during peak transit hours. For both regions, peak transit hours appear to be between 6 am and 9 am, as people move from their homes to work—the bulk of this traffic could be reduced with a more efficient public transit system, targeted towards professionals.

Background

The University of Toronto region was chosen for this particular discussion because the students that live in the region heavily affect the patterns of traffic of the region. University of Toronto Scarborough Camps is a large school with a large student population; because there are this many students in the population, there are different traffic patterns in the region (Utoronto. ca, 2015). The large, transitory population of students not only changes traffic patterns, but they also change parking patterns as well as the time of day when rush hour occurs; the presence of such a large university in the Toronto area makes for an excellent case study (Utoronto. ca, 2015). By comparing the University of Toronto area traffic to the Pickering region, a better understanding of the trends in traffic patterns and the effects of the university can be understood (Dmg. utoronto. ca, 2015).

There were a number of important data sources that were used in this report. The Transportation Tomorrow Survey was used extensively, as were the University of Toronto website and a number of different data management group programs through the University of Toronto. Data used for this survey has been gleaned from the most recent traffic information available to the researchers, except when otherwise stated—in many cases, the most recent data available is 5-8 years old, and is not available for most recent years (Jpint. utoronto. ca, 2015; Dmg. utoronto. ca, 2015). TTS reports were used extensively for comparative purposes.

Study Area 1: University of Toronto Scarborough Campus and the Scarborough Region

The Scarborough Campus of the University of Toronto is a unique area for traffic, because it is a relatively densely packed area. In 2011, there were roughly 215, 200 households in the Scarborough area, but a population of 626, 300, which places the population at about 2. 9 persons per household (Dmg. utoronto. ca, 2015). However, because of the campus and the number of students present on the campus, this is a gross overestimation of the number of persons per household (Dmg. utoronto. ca, 2015). Each household had approximately 1. 7 drivers, but those drivers made 5. 6 trips per day—a relatively high number, but one that is expected, because the former city of Scarborough is outside the city center, and there are many families in the area that have to travel to and from school and work (Dmg. utoronto. ca, 2015).

Rush hour for the city of Scarborough seems to be between 6am and 9am; between these hours, approximately 44% of these trips are made by

individuals traveling to work, while only 25% are made by individuals traveling to school (Dmg. utoronto. ca, 2015). This indicates that students are less likely to commute—perhaps because many live within walking or biking distance of the campus, and the students do not need to use public transportation or a car as frequently as individuals who need to travel to work do (Dmg. utoronto. ca, 2015).

Study Area 2: Pickering

As can be seen by the chart attached, there are significant trips out of the town of Pickering early in the mornings (Dmg. utoronto. ca, 2015). Pickering is a smaller town than Scarborough, with a population of only 88, 000 individuals; however, the residents do more driving in Pickering than they do in Scarborough. This may be because as a smaller town, Pickering offers less in the way of jobs and work; instead, people have to commute out of Pickering in the mornings (Dmg. utoronto. ca, 2015). The residents take approximately 50, 000 trips to work early in the morning, with each driver making a staggering 6. 8 trips per day (Dmg. utoronto. ca, 2015). Research suggests that the relatively high percentage of " other" trips made out of Pickering—26% of the trips made in 24 hours—indicates that there are more individuals traveling for leisure in Pickering (Dmg. utoronto. ca, 2015). There are issues associated with the traffic load during these times that must be addressed further. Because most of the traffic is, again, happening in the early hours of the morning, it seems important to note that most of the traffic alleviation programs should focus on these earlier hours as well. Students make up a relatively small fraction of the number of individuals traveling during these hours, and more than half of the individuals making

trips during these hours are drivers—this means that many people are driving alone. If drivers can be convinced to stop driving alone, it seems as though the traffic would decrease notably. Programs for carpooling can be put in place to help alleviate these traffic problems (Dmg. utoronto. ca, 2015).

Discussion

Current transit patterns in both the Pickering area and the Scarborough area are affected by the number of individuals that are using their cars to get to work between the hours of 6am and 9 am (Dmg. utoronto. ca, 2015). These travel patterns reflect the need of those in the suburbs to travel from the suburbs into the other areas of the urban center, and the vast majority of individuals in the suburbs are more likely to use a car than public transport (Dmg. utoronto. ca, 2015). As can be seen from the preceding table, taken from the TTS report for the Pickering region, there are approximately 210, 000 trips taken by Pickering area residents each day, and many of those trips occur between 6 am and 9am (Dmg. utoronto. ca, 2015). The residents of this region make approximately 6. 8 trips per day, meaning that they are utilizing the roads slightly more frequently than their neighbors in the Scarborough region (Dmg. utoronto. ca, 2015).

Expanding public transport hubs outwards into the sprawling suburban areas of Toronto, Hamilton, and Scarborough would be an excellent first step for the creation of lighter, more sustainable traffic patterns; however, it is also important to note that expanded public transport must be efficient, effective, and extensive to appeal to individual households that must make more than

five trips per day, like the ones in the Scarborough region and Greater

Toronto (Dmg. utoronto. ca, 2015).

Recommendations and Conclusion

The current transit patterns in both regions demonstrate that households

make a number of trips, especially early in the morning, because people

need to be taken to school and to work. Expanding public transit options for

the region could be extremely effective insofar as reducing traffic during

peak hours, especially if hubs are placed in various key points of these

suburban regions. Instead of driving to multiple places, travelers could drive

to a single hub, park their cars, and utilize public transit options. This would

be especially effective for individuals who do not have dependents that need

to be dropped off at school or other locations; it would provide an easier,

stress-free commute in both the early morning and afternoon as individuals

return from work. It seems that students already use public transit, so the

expansion of public transit would potentially improve their commute as well.

References

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TTS QUERIES

USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00 DATA : Households

FILTER 1 : n_licence => 0-9 FILTER 2 : n_hhld_trip => 0-99 VARIABLE :

pd_hhld 2006 TTS V1. 0 Count Expanded PD 1 of Toronto 4947 100635 PD 2

of Toronto 4336 82952 PD 3 of Toronto 4896 90618 PD 4 of Toronto 5310

95575 PD 5 of Toronto 2315 45571 PD 6 of Toronto 4629 87344 PD 7 of

Toronto 1250 26244 PD 8 of Toronto 3743 70542 PD 9 of Toronto 1532

28619 PD 10 of Toronto 2495 48163 PD 11 of Toronto 3820 71925 PD 12 of

Toronto 1488 27479 PD 13 of Toronto 4069 78923 PD 14 of Toronto 1348

23880 PD 15 of Toronto 1397 27458 PD 16 of Toronto 4037 73386 Brock 301

4422 Uxbridge 417 6657 Scugog 470 7703 Pickering 1289 28212 Ajax 1302

28617 Whitby 1824 37239 Oshawa 2544 54919 Clarington 1380 26867

Georgina 834 15392 East Gwillimbury 400 6887 Newmarket 1293 25089

Aurora 866 15654 Richmond Hill 2532 50998 Whitchurch-Stouffville 457

8526 Markham 4015 77190 King 342 6397 Vaughan 3484 69535 Caledon

1133 18214 Brampton 6060 125935 Mississauga 10752 214882 Halton Hills

1090 18812 Milton 1089 18449 Oakville 3269 56510 Burlington 3761 63159

Flamborough 703 13083 Dundas 566 9386 Ancaster 620 10751 Glanbrook

334 5618 Stoney Creek 1167 21204 Hamilton 6580 134436 Grimsby 530

8744 Lincoln 402 7623 Pelham 352 5934 Niagara-O-T-L 306 5447 St

Catharines 2837 54727 Thorold 371 7053 Niagara Falls 1537 32485 Welland

1112 20717 Port Colbourne 431 7791 Fort Erie 623 12218 West Lincoln 256

4296 Wainfleet 126 2390 Waterloo 1844 36779 Kitchener 3689 79218

Cambridge 2161 43432 North Dumfries 171 3051 Wilmot 321 6093 Wellesley

166 2839 Woolwich 379 6581 City of Guelph 2331 42880 Puslinch 97 2341

Eramosa/Guelph (Guelph Twp) 203 4068 Centre Wellington(Pilkington) 577

9544 Erin 199 3809 Orangeville 549 9429 Barrie 2085 46536 Innisfil 675

11402 Bradford-W Gwillimbury 432 7946 New Tecumseth 475 10040 Adjala-

Tosorontio 155 3247 Essa 306 5976 Clearview 274 5011 Springwater 319

5941 Kawartha Lakes (Lindsay) 1709 29514 Peterborough 1733 31204

Cavan-Millbrook-N Monaghan (C 163 3019 Otonabee-S Monaghan (S Monagh

154 2749 Asphodel-Norwood (Asphodel) 80 1631 Dummer-Douro (Dummer)

135 2560 Lakefield-Smith-Ennismore (Sm 388 7136 Brant 617 12235

Collingwood 450 7317 Wasaga Beach 383 6235 Tiny & Christian Island 30

233 4525 Penetanguishene 215 3489 Midland 386 6898 Tay 211 3836 Oro-

Medonte 403 7323 Severn 244 4629 Ramara 217 4088 Orillia 631 12235

Mulmur 84 1195 Shelburne 207 1851 Amaranth 113 1241 Melancthon 42

1004 Mono Township 137 2340 East Luther Grand Valley 121 966 East

Garafraxa 58 773 Brantford 1740 35608 Total 149631 2871245

USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00 DATA : Households

FILTER 1 : region_hhld => Toronto - Brant VARIABLE : n_emp_home 2006

TTS V1. 0 Count Expanded 0 135645 2606923 1 11953 226387 2 1894

35369 3 113 2090 4 18 317 5 7 137 7 1 22 Total 149631 2871245

USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00 DATA : Households

FILTER 1 : region_hhld => Toronto - Brant VARIABLE : n_student 2006 TTS

V1. 0 Count Expanded 0 95558 1831295 1 26769 515638 2 19508 374763 3

6036 115595 4 1363 26309 5 293 5684 6 74 1413 7 23 422 8 4 64 9 3 62

Total 149631 2871245

USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00 DATA : Households

FILTER 1 : region_hhld => Toronto - Brant VARIABLE : n_hhld_trip 2006 TTS

V1. 0 Count Expanded 0 16738 321312 1 652 12453 2 24839 480120 3 6674

128406 4 25427 489345 5 7467 142712 6 17958 343928 7 6169 117904 8

12030 230172 9 4868 93261 10 7125 136268 11 3165 60290 12 4307

82404 13 2135 40604 14 2453 46916 15 1345 25462 16 1472 28096 17 922

17583 18 904 17248 19 534 10211 20 560 10629 21 344 6544 22 361 6923

23 234 4470 24 187 3533 25 153 2950 26 104 1949 27 99 1880 28 85 1568

29 75 1439 30 49 931 31 41 767 32 36 703 33 19 363 34 17 325 35 19 349

36 13 244 37 10 189 38 6 112 39 5 100 40 5 103 41 5 99 42 8 149 43 4 75

44 1 19 45 3 58 46 1 18 47 1 20 48 1 19 55 1 19 Total 149631 2871245

USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00 DATA : Households

FILTER 1 : region_hhld => Toronto - Brant VARIABLE : region_hhld 2006 TTS

V1. 0 Count Expanded Toronto 51612 979314 Durham 9527 194637 York

14223 275667 Peel 17945 359031 Halton 9209 156931 Hamilton 9970

194479 Niagara 8883 169425 Waterloo 8731 177992 Guelph 2331 42880

Wellington 1076 19761 Orangeville 549 9429 Barrie 2085 46536 Simcoe

5378 97903 Kawartha Lakes 1709 29514 Peterborough City 1733 31204

Peterborough 920 17094 Orillia 631 12235 Dufferin 762 9369 Brantford 1740

35608 Brant 617 12235 Total 149631 2871245 USER : Valeria Cheung - UofT

DATE : Jul 8 2015 01: 13: 00 DATA : Households FILTER 1 : region_hhld =>
Toronto - Brant VARIABLE : pd_hhld 2006 TTS V1. 0 Count Expanded PD 1 of
Toronto 4947 100635 PD 2 of Toronto 4336 82952 PD 3 of Toronto 4896
90618 PD 4 of Toronto 5310 95575 PD 5 of Toronto 2315 45571 PD 6 of
Toronto 4629 87344 PD 7 of Toronto 1250 26244 PD 8 of Toronto 3743
70542 PD 9 of Toronto 1532 28619 PD 10 of Toronto 2495 48163 PD 11 of
Toronto 3820 71925 PD 12 of Toronto 1488 27479 PD 13 of Toronto 4069
78923 PD 14 of Toronto 1348 23880 PD 15 of Toronto 1397 27458 PD 16 of
Toronto 4037 73386 Brock 301 4422 Uxbridge 417 6657 Scugog 470 7703
Pickering 1289 28212 Ajax 1302 28617 Whitby 1824 37239 Oshawa 2544
54919 Clarington 1380 26867 Georgina 834 15392 East Gwillimbury 400
6887 Newmarket 1293 25089 Aurora 866 15654 Richmond Hill 2532 50998
Whitchurch-Stouffville 457 8526 Markham 4015 77190 King 342 6397
Vaughan 3484 69535 Caledon 1133 18214 Brampton 6060 125935
Mississauga 10752 214882 Halton Hills 1090 18812 Milton 1089 18449
Oakville 3269 56510 Burlington 3761 63159 Flamborough 703 13083
Dundas 566 9386 Ancaster 620 10751 Glanbrook 334 5618 Stoney Creek
1167 21204 Hamilton 6580 134436 Grimsby 530 8744 Lincoln 402 7623
Pelham 352 5934 Niagara-O-T-L 306 5447 St Catharines 2837 54727 Thorold
371 7053 Niagara Falls 1537 32485 Welland 1112 20717 Port Colbourne 431
7791 Fort Erie 623 12218 West Lincoln 256 4296 Wainfleet 126 2390
Waterloo 1844 36779 Kitchener 3689 79218 Cambridge 2161 43432 North
Dumfries 171 3051 Wilmot 321 6093 Wellesley 166 2839 Woolwich 379 6581
City of Guelph 2331 42880 Puslinch 97 2341 Eramosa/Guelph (Guelph Twp)
203 4068 Centre Wellington(Pilkington) 577 9544 Erin 199 3809 Orangeville

549 9429 Barrie 2085 46536 Innisfil 675 11402 Bradford-W Gwillimbury 432

7946 New Tecumseth 475 10040 Adjala-Tosorontio 155 3247 Essa 306 5976

Clearview 274 5011 Springwater 319 5941 Kawartha Lakes (Lindsay) 1709

29514 Peterborough 1733 31204 Cavan-Millbrook-N Monaghan (C 163 3019

Otonabee-S Monaghan (S Monagh 154 2749 Asphodel-Norwood (Asphodel)

80 1631 Dummer-Douro (Dummer) 135 2560 Lakefield-Smith-Ennismore (Sm

388 7136 Brant 617 12235 Collingwood 450 7317 Wasaga Beach 383 6235

Tiny & Christian Island 30 233 4525 Penetanguishene 215 3489 Midland 386

6898 Tay 211 3836 Oro-Medonte 403 7323 Severn 244 4629 Ramara 217

4088 Orillia 631 12235 Mulmur 84 1195 Shelburne 207 1851 Amaranth 113

1241 Melancthon 42 1004 Mono Township 137 2340 East Luther Grand

Valley 121 966 East Garafraxa 58 773 Brantford 1740 35608 Total 149631

2871245 USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00 DATA :

Households FILTER 1 : region_hhld => Toronto - Brant VARIABLE : n_person

2006 TTS V1. 0 Count Expanded 1 30664 592888 2 49961 953512 3 26962

517510 4 26894 515740 5 10433 200780 6 3349 64430 7 899 17338 8 295

5711 9 97 1867 10 48 931 11 17 327 12 7 123 13 3 52 14 1 17 16 1 19 Total

149631 2871245 USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00

DATA : Households FILTER 1 : region_hhld => Toronto - Brant VARIABLE :

n_vehicle 2006 TTS V1. 0 Count Expanded 0 19889 389989 1 59500

1147258 2 55027 1046517 3 11739 221981 4 2716 51274 5 521 9691 6 124

2369 7 39 735 8 18 315 9 11 203 10 7 128 11 7 132 12 5 101 13 4 82 14 3

53 15 2 38 20 1 19 21 6 116 22 1 22 23 7 140 32 2 40 36 1 24 99 1 18 Total

149631 2871245 USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00

DATA : Households FILTER 1 : region_hhld => Toronto - Brant VARIABLE :

n_licence 2006 TTS V1. 0 Count Expanded 0 12271 239610 1 42753 827700 2 71410 1360672 3 16498 314973 4 5530 105887 5 1014 19427 6 131 2532 7 21 392 8 2 34 9 1 19 Total 149631 2871245 USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00 DATA : Households FILTER 1 : region_hhld => Toronto - Brant VARIABLE : n_student 2006 TTS V1. 0 Count Expanded 0 95558 1831295 1 26769 515638 2 19508 374763 3 6036 115595 4 1363 26309 5 293 5684 6 74 1413 7 23 422 8 4 64 9 3 62 Total 149631 2871245 USER : Valeria Cheung - UofT DATE : Jul 8 2015 01: 13: 00 DATA : Households FILTER 1 : region_hhld => Toronto - Brant VARIABLE : n_hhld_trip 2006 TTS V1. 0 Count Expanded 0 16738 321312 1 652 12453 2 24839 480120 3 6674 128406 4 25427 489345 5 7467 142712 6 17958 343928 7 6169 117904 8 12030 230172 9 4868 93261 10 7125 136268 11 3165 60290 12 4307 82404 13 2135 40604 14 2453 46916 15 1345 25462 16 1472 28096 17 922 17583 18 904 17248 19 534 10211 20 560 10629 21 344 6544 22 361 6923 23 234 4470 24 187 3533 25 153 2950 26 104 1949 27 99 1880 28 85 1568 29 75 1439 30 49 931 31 41 767 32 36 703 33 19 363 34 17 325 35 19 349 36 13 244 37 10 189 38 6 112 39 5 100 40 5 103 41 5 99 42 8 149 43 4 75 44 1 19 45 3 58 46 1 18 47 1 20 48 1 19 55 1 19 Total 149631 2871245