# Introduction

In the fall of 1994, the City of Edmonton, as part of the Transportation Master Plan, undertook an extensive survey of households in the Edmonton region to determine the nature of current travel patterns. This information will be used to assess the transportation needs of the City, and develop a long term plan to meet those needs.

The first step in determining the need for transportation infrastructure and services is gaining an understanding of current travel patterns and the underlying elements which affect these patterns. Once these are known, transportation planning models can be developed to project future transportation needs based upon various assumptions about the type and magnitude of regional growth and the location of these developments.

This report provides an overview of the information collected from the Household Travel Survey. It is intended to be illustrative of the pattern and intensity of the travel patterns in the Edmonton region at the time of the survey, as well as the variables which underlie these travel patterns.

## Overview Of The Household Travel Survey

Between November 1, 1994 and December 14, 1994, over 6,000 households in the Edmonton region participated in a survey which collected information about the household, the residents of the household, and travel information for each member of the household for a 24 hour period. The main objectives of the 1994 Household Travel Survey were to:

- Provide current demographics and travel data, including origin and destination, trip purpose, mode choice, time of day, activity visited, and trip frequency for developing a travel forecasting model for estimating and forecasting travel of all households in the Edmonton area.

- Provide current empirical data and stated preference data on travel choices, including cost, mode, and time of day, by a representative sample of households.

The survey respondents were selected at random from published telephone lists for the Edmonton region. Those households who agreed to participate in the survey were assigned a travel day and each member of the household was asked to record their travel information on travel diaries, which were provided in an information package mailed to each participating household. Household, person, and travel information was collected by trained surveyors following the assigned travel day. The survey results were coded and entered into an electronic data base for analysis.

## Study Area

The study area for the Household Travel Survey corresponds to the Edmonton Census Metropolitan Area (CMA) as defined by: the City of Edmonton, St. Albert, Strathcona County (including Sherwood Park), Fort Saskatchewan, M.D. of Sturgeon, County of Parkland (including Spruce Grove and Stony Plain), and the County of Leduc (including the City of Leduc, Devon and Beaumont). The study area is illustrated on the following page.

*Figure 0.1 - Study Area (Edmonton CMA)*

## Scaling The Survey Sample Results

All survey results presented in this report have been scaled to represent all person trips, or all households, for the geographic area represented (e.g. City of Edmonton, Edmonton Region). The scaled survey results compared favorably with control (actual) data which was available. For example, the scaled total survey population was within less than 1% of the estimated actual population for the region in 1994.

It is important to note that the results presented in this report are based on a sample. As a result, it can be expected that they may differ somewhat from census data or possibly other information which may be available on data items presented in this report.

*Since the results presented are scaled from the survey sample, caution should be used when interpreting or using numbers which are less than 500. A value of 500 would represent only about 10 survey observations.*

## Accuracy Of The Survey Results

Whenever a sample is taken to estimate the characteristics of a population, the sample estimate will vary from the actual data due to sampling error. In general, sampling error is reduced where the degree of variation which exists in the population is small, and the sample size is large. As a result, the accuracy of any survey results will vary with these parameters and be different for each data item included in the sample.

One of the key variables used in travel demand forecasting is the number of trips per household in the study area. This variable has been used to demonstrate the accuracy level of the survey results presented in this report. The Household Travel Survey indicates that, after scaling, the sampled households in the Edmonton CMA generated an average of 9.61 daily person trips per household. At a 90% confidence level, we estimate that the actual average number of trips for these households will range from 9.45 to 9.77 trips per household. In other words, 9 times out of 10, the average number of trips generated per household can be expected to vary plus or minus 1.7 %.

*Figure 0.2 - Sampling Error of Household Trip Generation Rates by Household Size (% of total)*
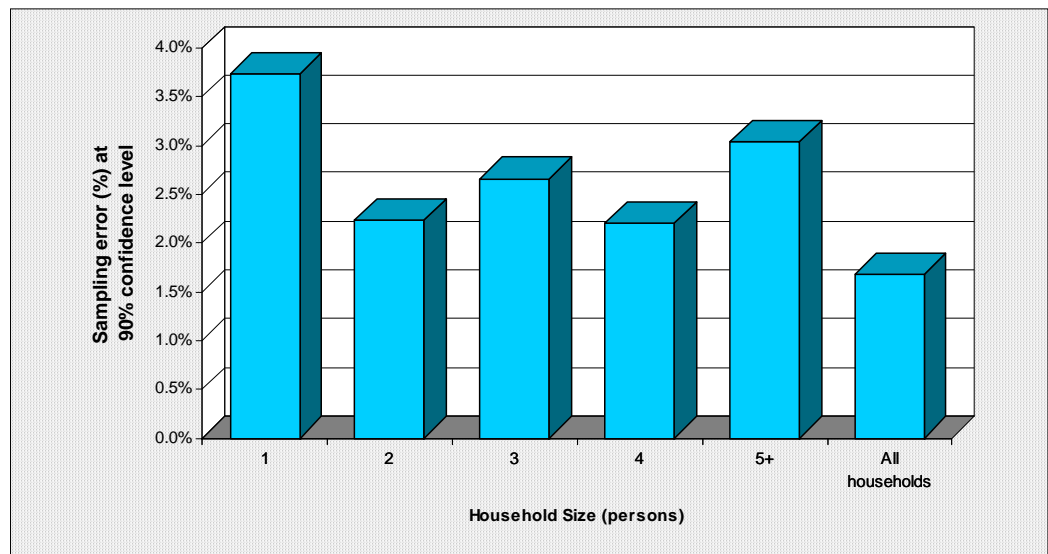
When looking at other data items or subsets of the data base, such as the trip generation rate by household size, the accuracy of the data can be expected to differ. Generally, when looking at specific data which represents a subset of the total data collected, the accuracy of the results will be lower. This is primarily due to the smaller sample size which this subset of the entire data set represents. However, the accuracy of the data will also depend upon the variation of the data within the sample as illustrated by this figure. In each instance, the estimated sampling error is larger than that for the total.

In each of the tables in this report, a 'blank' value indicates that no data was collected for that particular cell. A cell value of 'n/a' indicates that no value is applicable for that cell.

## *Report Content and Organization*

This report presents a summary of the results of the 1994 Household Travel Survey. Following this introductory section, there are four sections as follows:

- **Demographic Characteristics:** Describes characteristics about households, population and employment in the Edmonton region.

- **Trip Generation:** Describes various aspects of auto, transit, school and other trips, including: trip purpose, time of day, trip length and alternate travel choices.

- **Trip Origin and Destination:** Describes trip origins and destinations by trip purpose, mode choice and automobile occupancy.

- **Special Focus Areas:** Describes in more detail trip characteristics for trips with an origin or destination in the Central Business District (CBD) and in the University area.

# 2. Demographic Characteristics

T he Household Travel Survey captured detailed demographic information about the people living in the Edmonton Census Metropolitan Area (CMA). Information was collected about the household and about the people living in each household.

The majority of the information presented in this section is derived from the travel survey. The total number of households and total population in the Edmonton CMA was provided by the City of Edmonton Transportation Department and was based on Statistics Canada information. All statistics pertain to the period of the travel survey, which was undertaken in November and early December in 1994.

## 2.1 Household Information

The following household and person information was collected during the travel survey.

*Household information*

1. Location of the household
2. Type of residence (i.e. detached bungalow, apartment etc.)
3. Number of people residing in the household
4. Number of "out-of-area" visitors staying at the household
5. Number of automobiles (including autos, pick-ups, vans and motorcycles) available for use by persons staying at the household
6. Number of bicycles at the household which were used in the past 12 months
7. Combined annual income of all members of the household

*Person information*

1. Relationship to the 'head' of the household
2. The person's age and gender
3. Whether the person is currently licensed to drive
4. Whether the person has a transit pass, the cost and usage on the previous weekend
5. Whether the person has a long-term disability and what, if any, mobility aid they use
6. Major and minor employment/school status
7. Employment occupation and sector
8. Employment location
9. Whether the person worked on the travel day
10. Whether the person's employer requires them to start work at a specific time
11. The ability of the person to vary their work start time
12. The person's need for an automobile at work
13. Whether the employer provides parking and the cost and location of the parking

## 2.1.1  Population

The 1994 household and population statistics presented below were developed by the City of Edmonton Transportation Department and are based on previous censuses, not from Household Travel Survey data.  It should be noted that these values represent members of private households and do not include 'group' populations such as institutions or group homes.

*Table 2.1 - Population of the Edmonton Census Metropolitan Area (CMA)*

| Regional Zone | Households (1994) | % | Population (1994) | % | Persons per Household |
|---|---|---|---|---|---|
| 1 CBD | 4,251 | 1.7% | 6,161 | 1.0% | 1.45 |
| 2 University | 4,355 | 1.8% | 7,845 | 1.2% | 1.80 |
| 3 CBD Fringe | 25,099 | 10.2% | 44,255 | 7.0% | 1.76 |
| 4 Northwest-Inner | 18,441 | 7.5% | 43,756 | 7.0% | 2.37 |
| 5 Northeast-Inner | 35,806 | 14.6% | 95,152 | 15.1% | 2.66 |
| 6 Southeast-Inner | 28,035 | 11.4% | 61,319 | 9.8% | 2.19 |
| 7 Southwest-Inner | 22,184 | 9.0% | 54,592 | 8.7% | 2.46 |
| 8 West-Inner | 22,873 | 9.3% | 56,874 | 9.1% | 2.49 |
| 9 Northwest-Suburb | 11,623 | 4.7% | 36,583 | 5.8% | 3.15 |
| 10 Northeast-Suburb | 13,976 | 5.7% | 43,454 | 6.9% | 3.11 |
| 11 Southeast-Suburb | 26,420 | 10.8% | 86,119 | 13.7% | 3.26 |
| 12 Southwest-Suburb | 13,744 | 5.6% | 38,425 | 6.1% | 2.80 |
| 13 West-Suburb | 18,468 | 7.5% | 53,848 | 8.6% | 2.92 |
| Total - City | 245,275 | 100.0% | 628,383 | 100.0% | 2.56 |
| 14 Sherwood Park | 11,952 | 16.3% | 38,719 | 16.7% | 3.24 |
| 15 St. Albert | 14,013 | 19.1% | 45,198 | 19.4% | 3.23 |
| 16 Region-urban | 20,371 | 27.7% | 63,732 | 27.4% | 3.13 |
| 17 Region-rural | 27,120 | 36.9% | 84,846 | 36.5% | 3.13 |
| Total - Region | 73,456 | 100.0% | 232,495 | 100.0% | 3.17 |
| Total - CMA | 318,731 | | 860,878 | | 2.70 |

*Figure 2.1 - Population of the Edmonton Census Metropolitan Area (CMA)*
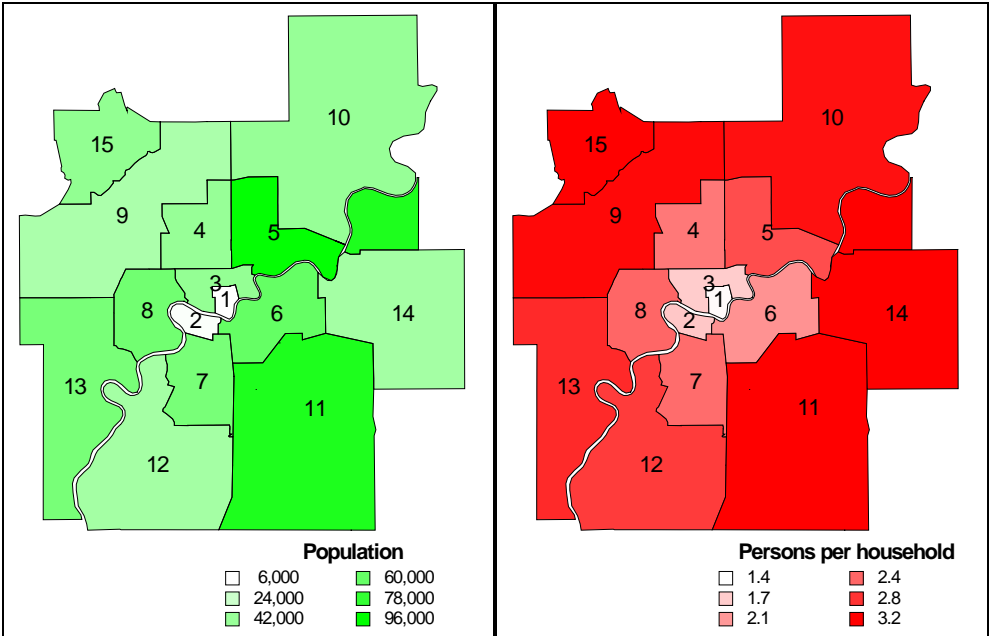
### 2.1.2  Automobiles

Automobiles are defined as all passenger cars, pickups, motorcycles and vans which are available for use by the persons residing in the household.

*Table 2.2 - Number of Automobiles in the Edmonton CMA*

| Regional Zone | Households | % | Automobiles | % | Automobiles per Household |
|---|---|---|---|---|---|
| 1 CBD | 4,251 | 1.7% | 3,188 | 0.8% | 0.75 |
| 2 University | 4,355 | 1.8% | 4,645 | 1.2% | 1.07 |
| 3 CBD Fringe | 25,099 | 10.2% | 27,041 | 7.0% | 1.08 |
| 4 Northwest-Inner | 18,441 | 7.5% | 27,012 | 7.0% | 1.46 |
| 5 Northeast-Inner | 35,806 | 14.6% | 59,175 | 15.3% | 1.65 |
| 6 Southeast-Inner | 28,035 | 11.4% | 41,242 | 10.7% | 1.47 |
| 7 Southwest-Inner | 22,184 | 9.0% | 33,506 | 8.7% | 1.51 |
| 8 West-Inner | 22,873 | 9.3% | 38,356 | 9.9% | 1.68 |
| 9 Northwest-Suburb | 11,623 | 4.7% | 21,444 | 5.5% | 1.85 |
| 10 Northeast-Suburb | 13,976 | 5.7% | 24,654 | 6.4% | 1.76 |
| 11 Southeast-Suburb | 26,420 | 10.8% | 50,726 | 13.1% | 1.92 |
| 12 Southwest-Suburb | 13,744 | 5.6% | 23,837 | 6.2% | 1.73 |
| 13 West-Suburb | 18,468 | 7.5% | 32,054 | 8.3% | 1.74 |
| Total - City | 245,275 | 100.0% | 386,879 | 100.0% | 1.58 |
| 14 Sherwood Park | 11,952 | 16.3% | 26,018 | 16.0% | 2.18 |
| 15 St. Albert | 14,013 | 19.1% | 28,106 | 17.3% | 2.01 |
| 16 Region-urban | 20,371 | 27.7% | 44,532 | 27.4% | 2.19 |
| 17 Region-rural | 27,120 | 36.9% | 63,845 | 39.3% | 2.35 |
| Total - Region | 73,456 | 100.0% | 162,501 | 100.0% | 2.21 |
| Total - CMA | 318,731 | | 549,380 | | 1.72 |

*Figure 2.2 - Number of Automobiles in the Edmonton CMA*
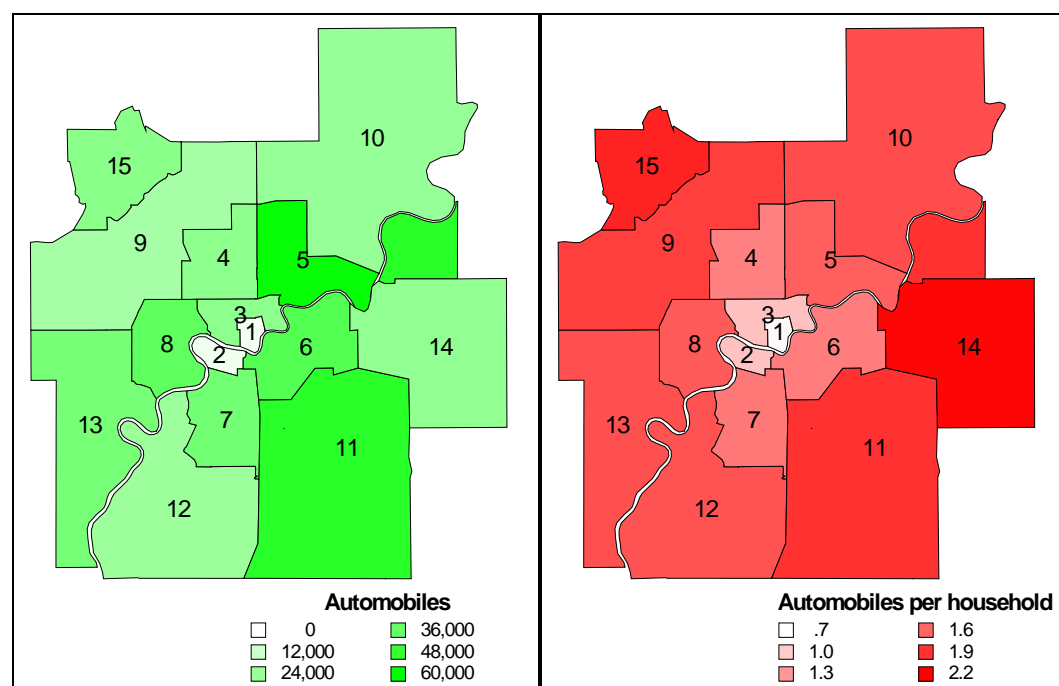
### 2.1.3  Bicycles

Bicycles include all bicycles which were available for use by each household and were used in the past 12 months.

*Table 2.3 - Number of Bicycles in the Edmonton CMA*

| Regional Zone | Households | % | Bicycles | % | Bicycles per Household |
|---|---|---|---|---|---|
| 1 CBD | 4,251 | 1.7% | 2,279 | 0.6% | 0.54 |
| 2 University | 4,355 | 1.8% | 3,612 | 1.0% | 0.83 |
| 3 CBD Fringe | 25,099 | 10.2% | 20,938 | 5.7% | 0.83 |
| 4 Northwest-Inner | 18,441 | 7.5% | 22,045 | 6.0% | 1.20 |
| 5 Northeast-Inner | 35,806 | 14.6% | 52,134 | 14.2% | 1.46 |
| 6 Southeast-Inner | 28,035 | 11.4% | 36,045 | 9.8% | 1.29 |
| 7 Southwest-Inner | 22,184 | 9.0% | 32,658 | 8.9% | 1.47 |
| 8 West-Inner | 22,873 | 9.3% | 33,245 | 9.1% | 1.45 |
| 9 Northwest-Suburb | 11,623 | 4.7% | 23,479 | 6.4% | 2.02 |
| 10 Northeast-Suburb | 13,976 | 5.7% | 26,279 | 7.2% | 1.88 |
| 11 Southeast-Suburb | 26,420 | 10.8% | 55,612 | 15.2% | 2.10 |
| 12 Southwest-Suburb | 13,744 | 5.6% | 24,815 | 6.8% | 1.81 |
| 13 West-Suburb | 18,468 | 7.5% | 33,354 | 9.1% | 1.81 |
| Total - City | 245,275 | 100.0% | 366,496 | 100.0% | 1.49 |
| 14 Sherwood Park | 11,952 | 16.3% | 26,487 | 16.6% | 2.22 |
| 15 St. Albert | 14,013 | 19.1% | 34,903 | 21.9% | 2.49 |
| 16 Region-urban | 20,371 | 27.7% | 43,665 | 27.4% | 2.14 |
| 17 Region-rural | 27,120 | 36.9% | 54,543 | 34.2% | 2.01 |
| Total - Region | 73,456 | 100.0% | 159,598 | 100.0% | 2.17 |
| Total - CMA | 318,731 | | 526,093 | | 1.65 |

*Figure 2.3 - Number of Bicycles in the Edmonton CMA*
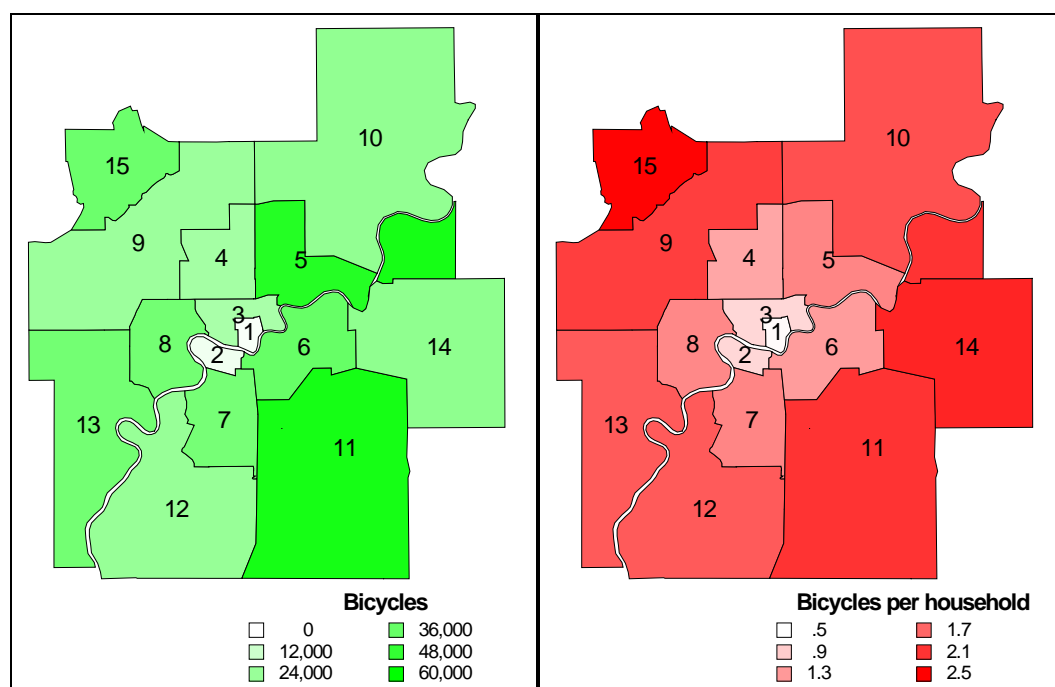
### 2.1.4 Household Size (persons)

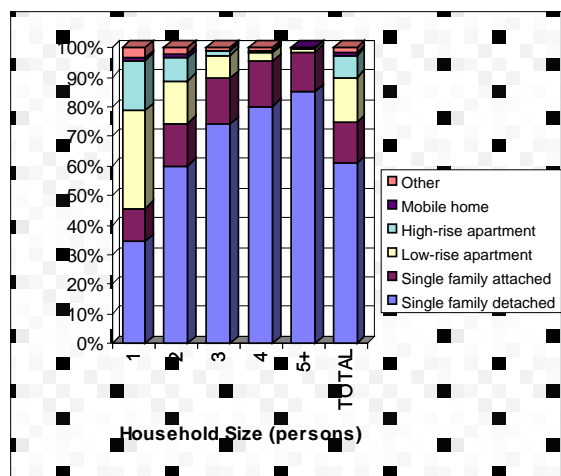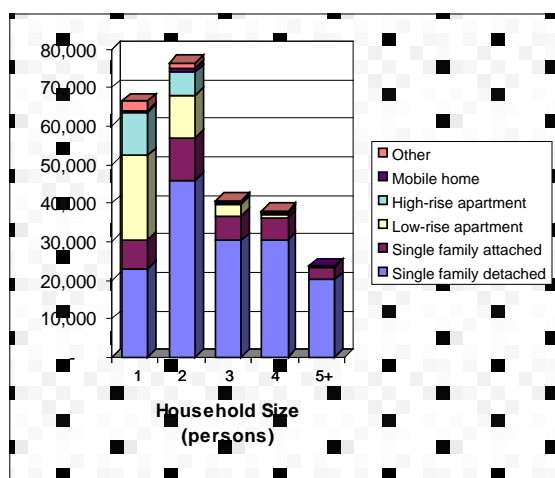In the City of Edmonton there are approximately 245,300 private households with a total population of 628,400 people.

*Table 2.4 - Number of Households in the City of Edmonton by Household Size and Type of Household*

| *City of Edmonton* | **Household Size (persons)** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Type of household** | 1 | 2 | 3 | 4 | 5 + | TOTAL | % | Persons per household |
| Single family detached | 22,936 | 45,891 | 30,264 | 30,465 | 20,140 | 149,696 | 61.0% | 2.91 |
| Single family attached | 7,482 | 11,065 | 6,260 | 5,756 | 3,153 | 33,717 | 13.7% | 2.61 |
| Low-rise apartment | 21,965 | 11,027 | 3,148 | 1,056 | 289 | 37,485 | 15.3% | 1.59 |
| High-rise apartment | 11,312 | 6,003 | 558 | 173 | | 18,047 | 7.4% | 1.42 |
| Mobile home | 431 | 997 | 201 | 210 | 47 | 1,887 | 0.8% | 2.18 |
| Other | 2,341 | 1,522 | 275 | 304 | | 4,442 | 1.8% | 1.67 |
| TOTAL | 66,467 | 76,506 | 40,707 | 37,964 | 23,630 | 245,274 | 100.0% | 2.56 |
| % | 27.1% | 31.2% | 16.6% | 15.5% | 9.6% | 100.0% | | |

The average household size in the City of Edmonton is 2.56 persons. Over 58% of households in Edmonton have one or two persons.

The majority of the population in the City of Edmonton live in single-family detached houses. The proportion of households in single-family detached houses increases significantly with the number of people in the household, from about one-third for single person households to over 80% for households with 5 or more persons. Approximately one out of every four people live in either a low-rise or high rise apartment. Multi-family units comprises approximately 50% of housing for single person households. This decreases dramatically as household size increases. For two person households, multi-family (apartments) comprises 22% of housing, decreasing to 9% for three person households.

The average household size for persons living in single family attached or detached houses is nearly

*Figure 2.4 - Number of Households in the City of Edmonton by Household Size and Type of Household*

twice that for persons living in an apartment.

*Table 2.5 - Number of Households in the Edmonton Region by Household Size and Type of Household*
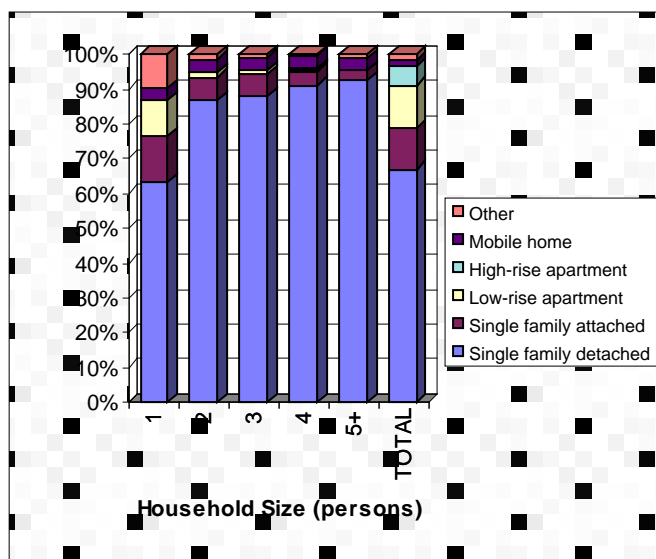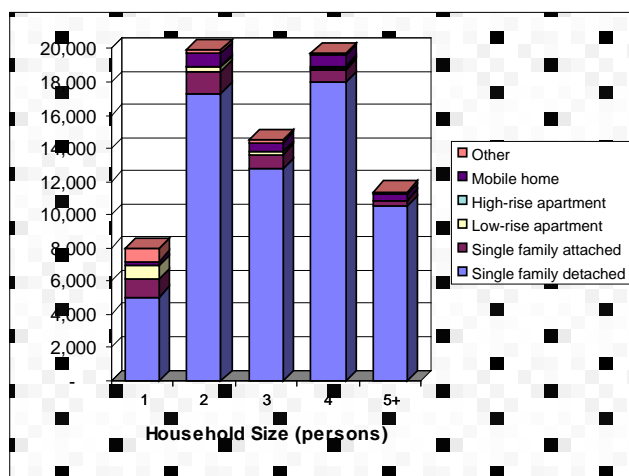
| Edmonton Region | Household Size (persons) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Type of household | 1 | 2 | 3 | 4 | 5 + | TOTAL | % | Persons per household |
| Single family detached | 5,030 | 17,316 | 12,731 | 17,962 | 10,518 | 63,557 | 86.5% | 3.26 |
| Single family attached | 1,050 | 1,337 | 915 | 785 | 358 | 4,445 | 6.1% | 2.57 |
| Low-rise apartment | 828 | 270 | 170 | 120 | | 1,387 | 1.9% | 1.70 |
| High-rise apartment | | 28 | | 75 | | 103 | 0.1% | 3.46 |
| Mobile home | 281 | 744 | 550 | 708 | 352 | 2,635 | 3.6% | 3.07 |
| Other | 762 | 260 | 112 | 55 | 141 | 1,329 | 1.8% | 1.96 |
| TOTAL | 7,952 | 19,955 | 14,477 | 19,704 | 11,368 | 73,456 | 100.0% | 3.17 |
| % | 10.8% | 27.2% | 19.7% | 26.8% | 15.5% | 100.0% | | |

The average household size in the Edmonton Region is 3.17 persons per household, which is higher than the average size observed in the City of Edmonton. As well, only about 38% of all households have two or less people compared to over 58% in the City. Higher densities in the region are most significant for single family detached, high-rise apartments and mobile homes.

More than 90% of the people live in either a single-family detached or attached home. This is significantly higher than the 65% observed for the City of Edmonton. This higher proportion of single family housing prevails across all household sizes. In households with 2 or more persons, between 85% and 90% of housing are single family units.

As may be expected, apartments comprise a relatively small proportion of all housing units in the Edmonton Region, 2% versus 23% in the City of Edmonton.

*Figure 2.5 - Number of Households in the Edmonton Region by Household Size and Type of Household*

## 2.1.5  Automobiles Available for Use

*Table 2.6 - Number of Households in the City of Edmonton by Household Size and Number of Automobiles*

| *City of Edmonton* | **Household Size (persons)** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **No. of autos** | 1 | 2 | 3 | 4 | 5 + | TOTAL | % | Persons per household |
| None | 17,345 | 5,124 | 1,685 | 496 | 233 | 24,883 | 10.1% | 1.44 |
| 1 | 43,700 | 28,897 | 11,354 | 8,317 | 4,092 | 96,361 | 39.3% | 1.98 |
| 2 | 3,925 | 35,908 | 17,919 | 20,960 | 13,057 | 91,768 | 37.4% | 3.08 |
| 3 | 1,163 | 5,233 | 8,048 | 5,622 | 4,711 | 24,776 | 10.1% | 3.40 |
| 4 | 210 | 991 | 1,437 | 1,825 | 1,331 | 5,793 | 2.4% | 3.69 |
| 5 + | 125 | 353 | 264 | 744 | 206 | 1,691 | 0.7% | 3.37 |
| TOTAL | 66,467 | 76,506 | 40,707 | 37,964 | 23,630 | 245,274 | 100.0% | 2.56 |
| % | 27.1% | 31.2% | 16.6% | 15.5% | 9.6% | 100.0% | | |
| Autos per household | 0.85 | 1.60 | 1.93 | 2.06 | 2.15 | 1.58 | | |

The number of automobiles available to each household depends significantly on the average household size. Generally, as household size increases, the average number of automobiles per household also increases. Single person households averaged less than one automobile (0.8). This is due to a significant proportion of single person households with no automobiles (26%).

Households with 2 or more persons averaged between 1.6 and 2.15 automobiles per

*Figure 2.6 - Number of Households in the City of Edmonton by Household Size and Number of Automobiles*



household. The proportion of households with two automobiles increases from 47% for 2 person households to 55 % for households with five or more people.
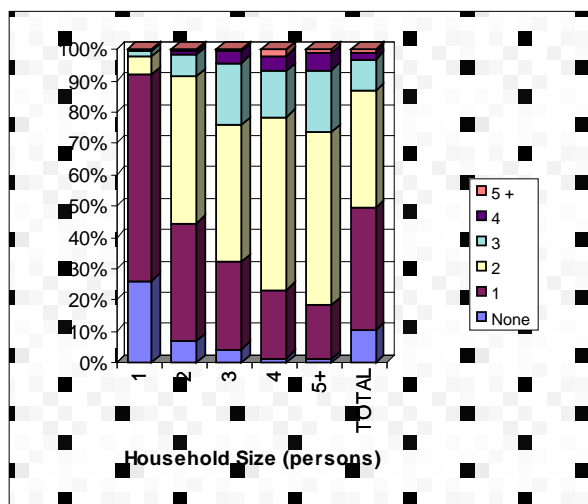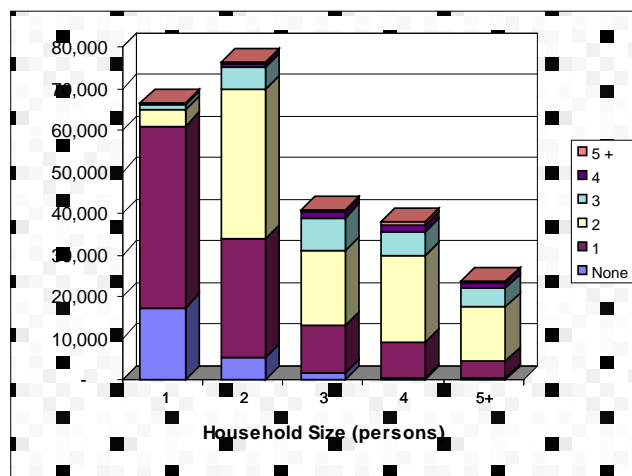


The proportion of households with three automobiles increases significantly when there are three or more people per household (from 4.4% to 18%). A very small proportion of households has four or more automobiles (approximately 3 percent).
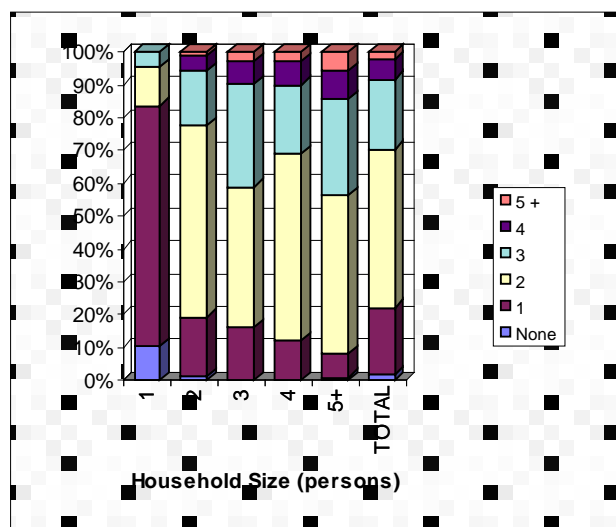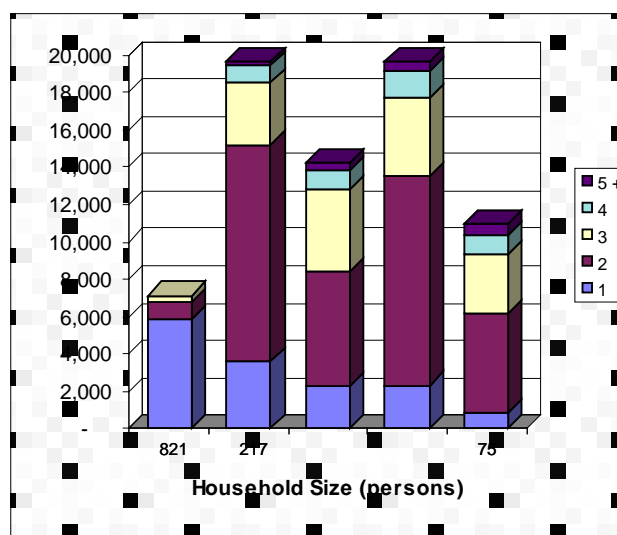
*Table 2.7 - Number of Households in the Edmonton Region by Household Size and Number of Automobiles*

| Edmonton Region | Household Size (persons) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. of autos | 1 | 2 | 3 | 4 | 5 + | TOTAL | % | Persons per household |
| None | 821 | 217 | | | 75 | 1,113 | 1.5% | 1.53 |
| 1 | 5,839 | 3,603 | 2,307 | 2,349 | 820 | 14,918 | 20.3% | 2.26 |
| 2 | 934 | 11,614 | 6,090 | 11,191 | 5,323 | 35,152 | 47.9% | 3.27 |
| 3 | 358 | 3,285 | 4,446 | 4,179 | 3,232 | 15,501 | 21.1% | 3.54 |
| 4 | | 937 | 1,010 | 1,440 | 955 | 4,341 | 5.9% | 3.70 |
| 5 + | | 299 | 624 | 544 | 964 | 2,431 | 3.3% | 4.43 |
| TOTAL | 7,952 | 19,955 | 14,477 | 19,704 | 11,368 | 73,456 | 100.0% | 3.17 |
| % | 10.8% | 27.2% | 19.7% | 26.8% | 15.5% | 100.0% | | |
| Autos per household | 1.10 | 2.11 | 2.46 | 2.32 | 2.66 | 2.21 | | |

There are significantly more automobiles available per household in the Edmonton region than in the City of Edmonton. The average number of automobiles per household in the region is 2.2, versus 1.6 for the City of Edmonton. This higher rate of automobile ownership in the region prevails for all household sizes.

Almost every household has access to an automobile in the Edmonton Region. Only 1.5% of households do not have an automobile, compared to approximately 10% in the City

*Figure 2.7 - Number of Households in the Edmonton Region by Household Size and Number of Automobiles*



of Edmonton. The number of households with 2 or more automobiles is significantly higher in the Edmonton region than in the City of Edmonton. While approximately 50% of City of Edmonton households had two or more automobiles, in the region this proportion is 78%. Forty-eight percent of households in the Region have access to two automobiles, over 21 percent have access to three vehicles and over 9 percent have access to four or more vehicles.



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### 2.1.6  Licenced Drivers

*Table 2.8 - Number of Households in the City of Edmonton by Number of Licenced Drivers and Number of Automobiles*

| *City of Edmonton* | **Number of Licenced Drivers in the Household** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **No. of autos** | None | 1 | 2 | 3 | 4 | 5 + | TOTAL | % | Drivers / household |
| None | 13,364 | 9,893 | 1,463 | 163 | | | 24,883 | 10.1% | 0.53 |
| 1 | 673 | 63,349 | 28,970 | 2,836 | 381 | 151 | 96,361 | 39.3% | 1.37 |
| 2 | 221 | 7,077 | 72,462 | 10,053 | 1,874 | 81 | 91,768 | 37.4% | 2.07 |
| 3 | | 1,642 | 11,761 | 8,075 | 2,994 | 304 | 24,776 | 10.1% | 2.54 |
| 4 | | 190 | 1,894 | 1,434 | 1,909 | 366 | 5,793 | 2.4% | 3.10 |
| 5 + | | 164 | 643 | 437 | 332 | 115 | 1,691 | 0.7% | 2.76 |
| TOTAL | 14,258 | 82,316 | 117,193 | 22,998 | 7,491 | 1,018 | 245,274 | 100.0% | 1.72 |
| % | 5.8% | 33.6% | 47.8% | 9.4% | 3.1% | 0.4% | 100.0% | | |
| Autos / household | 0.08 | 1.02 | 1.88 | 2.41 | 3.00 | 3.26 | 1.58 | | |

Almost half of the households in the City of Edmonton (48%) have two or more licensed drivers. Approximately one-third of all households have one licensed driver. Almost 13% of all households have three or more licensed drivers and approximately 6% of all households have no licensed drivers.

*Figure 2.8 - Number of Households in the City of Edmonton by Number of Licenced Drivers and Number of Automobiles*



The number of automobiles available per driver varies significantly. Generally, as the number of licensed drivers in a household increased, so did the number of automobiles available. For example, the number of licensed drivers per household increase from 1.37 for households with one automobile available, to 3.1
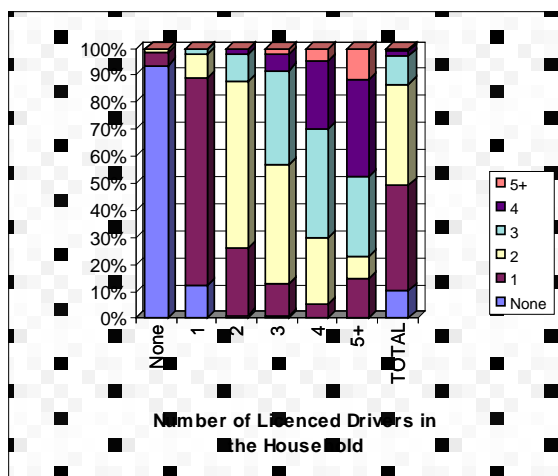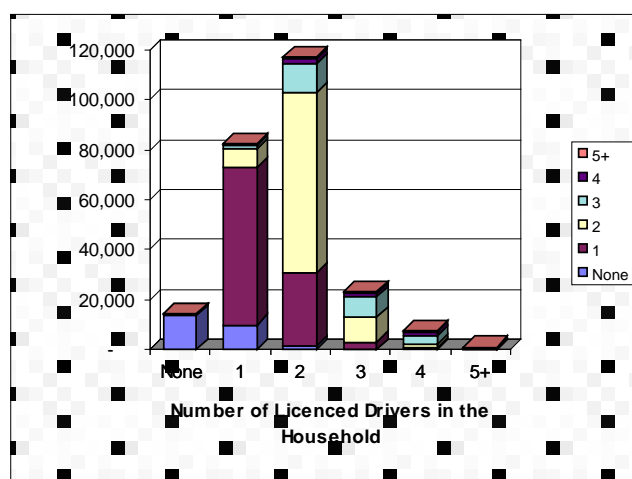


drivers per household where 4 automobiles are available. The average number of drivers per household decreases for five or more automobiles, which may be due to the relatively small number of households of this type included in the sample.

A very small proportion of households with no licensed drivers had one or two automobiles available to them (6%).

*Table 2.9 - Number of Households in the Edmonton Region by Number of Licenced Drivers and Number of Automobiles*

| Edmonton Region | Number of Licenced Drivers in the Household | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| No. of autos | None | 1 | 2 | 3 | 4 | 5 + | TOTAL | % | Drivers / household |
| None | 864 | | 174 | 75 | | | 1,113 | 1.5% | 0.22 |
| 1 | 371 | 9,296 | 5,040 | 92 | 118 | | 14,918 | 20.3% | 1.35 |
| 2 | | 1,845 | 28,441 | 4,028 | 658 | 154 | 35,152 | 47.9% | 2.11 |
| 3 | | 552 | 8,004 | 5,069 | 1,630 | 246 | 15,501 | 21.1% | 2.55 |
| 4 | | 47 | 1,574 | 1,306 | 1,250 | 165 | 4,341 | 5.9% | 3.00 |
| 5 + | | | 694 | 992 | 547 | 198 | 2,431 | 3.3% | 3.13 |
| TOTAL | 1,235 | 11,740 | 43,927 | 11,563 | 4,229 | 763 | 73,456 | 100.0% | 2.11 |
| % | 1.7% | 16.0% | 59.8% | 15.7% | 5.8% | 1.0% | 100.0% | | |
| Autos / household | 0.30 | 1.26 | 2.18 | 2.97 | 3.36 | 3.67 | 2.21 | | |

As with the number of automobiles, the number of licensed drivers per household is significantly higher in the region than in the City. For all households in the Region, the average number of licensed drivers per household was 2.1, versus 1.7 for the City of Edmonton. Similarly, the proportion of households with two or more licensed drivers per household increases to 78%, compared to approximately 50% for the City of Edmonton.

*Figure 2.9 - Number of Households in the Edmonton Region by Number of Licenced Drivers and Number of Automobiles*



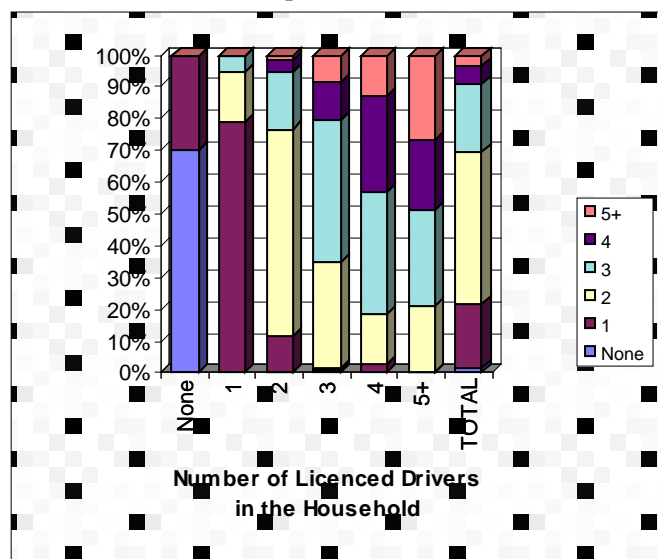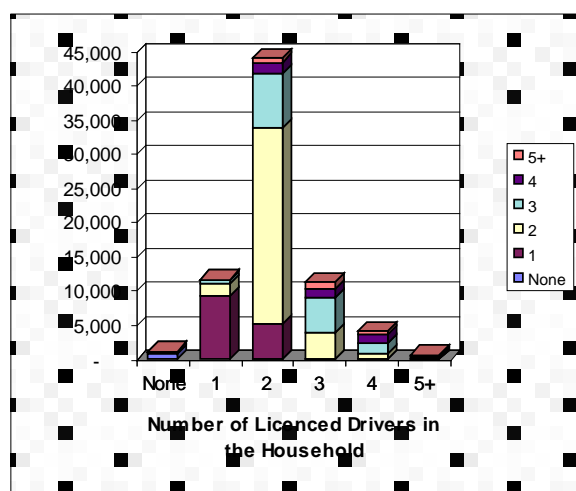As is the case with the City of Edmonton, as the number of automobiles available per household increases, the average number of drivers per household increases. For example, the number of licensed drivers per household increase from 1.35 for households with one automobile available, to 3.1 drivers per household where 5 or more automobiles are available.

Almost every household (98.3%) had at least one licensed driver.
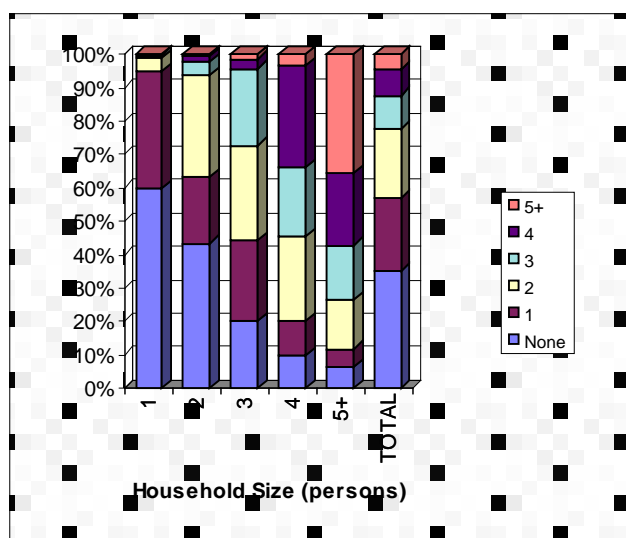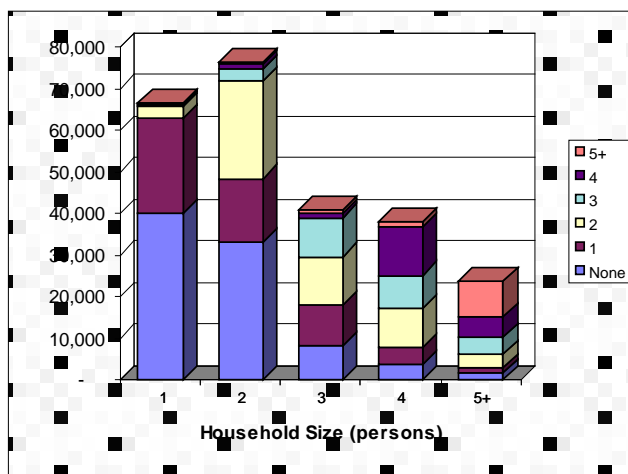
## 2.1.7  Bicycles Owned

*Table 2.10 - Number of Households in the City of Edmonton by Household Size and Number of Bicycles*

| City of Edmonton | Household Size (persons) | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| No. of bicycles | 1 | 2 | 3 | 4 | 5 + | TOTAL | % | Persons per household |
| None | 39,861 | 33,152 | 8,221 | 3,668 | 1,433 | 86,336 | 35.2% | 1.77 |
| 1 | 23,158 | 15,218 | 9,858 | 4,007 | 1,313 | 53,554 | 21.8% | 1.99 |
| 2 | 2,731 | 23,498 | 11,525 | 9,597 | 3,470 | 50,821 | 20.7% | 2.79 |
| 3 | 541 | 2,960 | 9,399 | 7,854 | 3,878 | 24,632 | 10.0% | 3.50 |
| 4 | | 1,204 | 1,144 | 11,498 | 5,086 | 18,932 | 7.7% | 4.16 |
| 5 + | 176 | 474 | 558 | 1,340 | 8,449 | 10,997 | 4.5% | 4.90 |
| TOTAL | 66,467 | 76,506 | 40,707 | 37,964 | 23,630 | 245,274 | 100.0% | 2.56 |
| % | 27.1% | 31.2% | 16.6% | 15.5% | 9.6% | 100.0% | | |
| Bikes per household | 0.47 | 1.03 | 1.69 | 2.64 | 3.70 | 1.49 | | |

There are almost as many bicycles as automobiles per household in Edmonton. Overall, there are approximately 1.49 bicycles per household, versus 1.58 automobiles. However, the proportion of households without any bicycles is significantly larger (35% for bicycles versus 10% for automobiles).

The proportion of households without bicycles decreases with larger household sizes. For example, almost 60 percent of households with a single person had no bicycle, compared to 43% for two person households, 20 % for three person households and 10% for 4 person households.

As with automobiles, as the average household increases, so does the average number of bicycles. For example, a household with two persons had an average of 1.03 bicycles, which increases to 3.7 bicycles for households with 5 or more people.
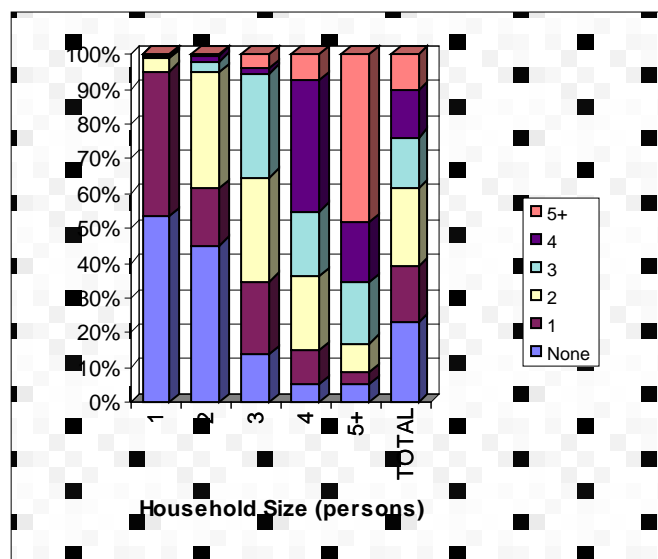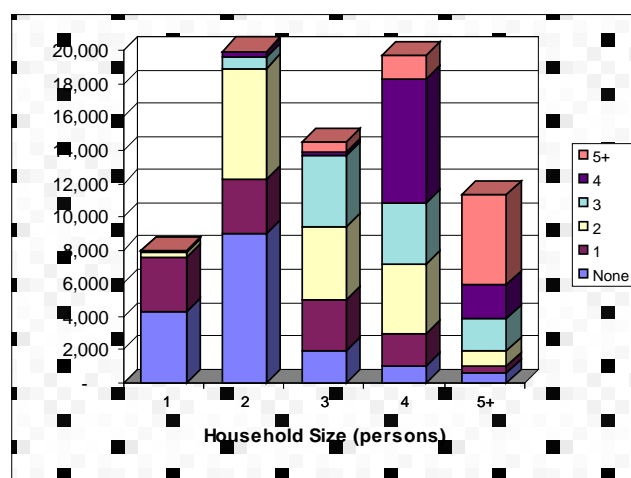
*Figure 2.10 - Number of Households in the City of Edmonton by Household Size and Number of Bicycles*

*Table 2.11 - Number of Households in the Edmonton Region by Household Size and Number of Bicycles*

| Edmonton Region | Household Size (persons) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. of Bicycles | 1 | 2 | 3 | 4 | 5 + | TOTAL | % | Persons per household |
| None | 4,246 | 9,017 | 1,968 | 1,030 | 582 | 16,843 | 22.9% | 2.09 |
| 1 | 3,317 | 3,257 | 3,064 | 1,908 | 394 | 11,941 | 16.3% | 2.41 |
| 2 | 318 | 6,666 | 4,337 | 4,200 | 938 | 16,459 | 22.4% | 2.93 |
| 3 | 35 | 645 | 4,327 | 3,687 | 1,997 | 10,691 | 14.6% | 3.68 |
| 4 | 35 | 342 | 206 | 7,412 | 1,968 | 9,964 | 13.6% | 4.18 |
| 5 + | | 28 | 574 | 1,467 | 5,489 | 7,558 | 10.3% | 5.15 |
| TOTAL | 7,952 | 19,955 | 14,477 | 19,704 | 11,368 | 73,456 | 100.0% | 3.17 |
| % | 10.8% | 27.2% | 19.7% | 26.8% | 15.5% | 100.0% | | |
| Bikes per household | 0.53 | 1.01 | 1.98 | 3.03 | 4.14 | 2.17 | | |

Households in the Edmonton Region tend to have more bicycles than households in the City of Edmonton. The average household in the Region has 2.17 bicycles, compared to 1.49 for the City of Edmonton.

As the size of household increases, the average number of bicycles increases. Where single person households average only 0.5 bicycles, this increases with household size to where households of five persons or more average over 4.1 bicycles.

*Figure 2.11 - Number of Households in the Edmonton Region by Household Size and Number of Bicycles*





The proportion of households with no bicycles is generally smaller for each household size in the Region. Overall, approximately 23% of households in the Region had no bicycles, compared to 35% in the City of Edmonton.

## 2.1.8  Household Income

Household income is defined as the combined annual gross income (before taxes) for all members of the household for the 1993 calendar year.  Cross-tabulations of household income to household type, household size and number of automobiles are presented for the City of Edmonton and the Edmonton Region..

*Table 2.12 - Number of Households in the City of Edmonton by Household Income and Type of Household*

| *City of Edmonton* | **Household Income** | | | | | |
|---|---|---|---|---|---|---|
| **Type of Household** | <$15,000 | $15-$24,999 | $25-$59,999 | $60,000+ | TOTAL | % |
| Single family detached | 13,474 | 16,446 | 67,779 | 51,997 | 149,696 | 61.0% |
| Single family attached | 5,976 | 5,512 | 16,958 | 5,271 | 33,717 | 13.7% |
| Low-rise apartment | 15,999 | 8,450 | 11,809 | 1,226 | 37,485 | 15.3% |
| High-rise apartment | 6,094 | 3,384 | 6,785 | 1,784 | 18,047 | 7.4% |
| Mobile home | 201 | 392 | 1,121 | 173 | 1,887 | 0.8% |
| Other | 1,554 | 1,107 | 1,295 | 487 | 4,442 | 1.8% |
| TOTAL | 43,298 | 35,291 | 105,746 | 60,938 | 245,274 | 100.0% |
| % | 17.7% | 14.4% | 43.1% | 24.8% | 100.0% | |

The largest proportion of households in the City of Edmonton reported an average annual income of between $25,000 and $60,000 per year (43%).   Approximately 25% reported incomes greater than $60,000, and 32% reported incomes of less than $25,000 per year.    Almost 18% of Edmonton households reported their annual income to be less than $15,000.

*Figure 2.12 - Number of Households in the City of Edmonton by Household Income and Type of Household*



The low income group predominately reside in low-rise apartments (37%) or single family units (31%).  This is also true, but to a lesser extent, for households reporting annual income between $15,000 and $25,000.  The majority of households with an average annual income greater than $25,000 predominately reside in single family units.  This is especially true of the highest income category ($60,000 +) where 85% of the households reside in single family units.
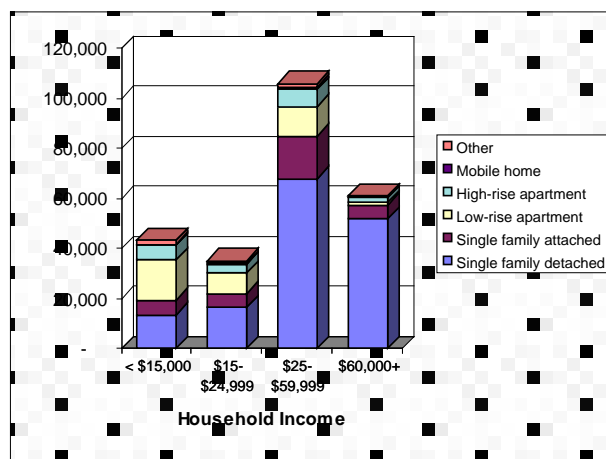
*Table 2.13 - Number of Households in the Edmonton Region by Household Income and Type of Household*
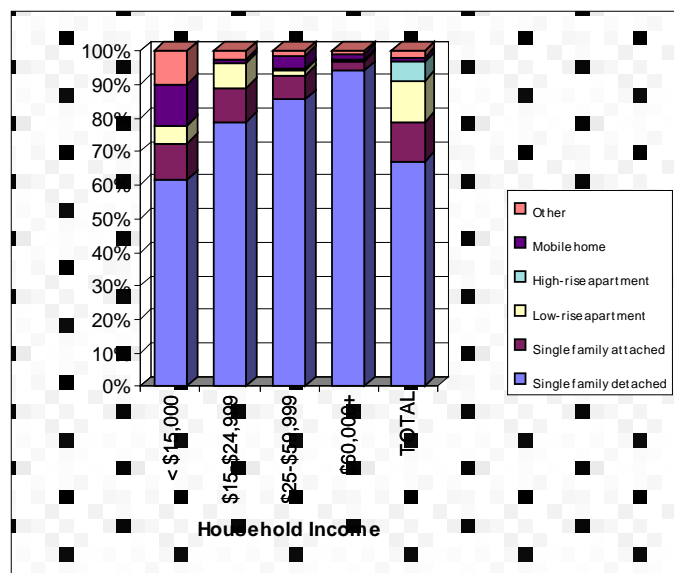
| Edmonton Region | Household Income | | | | | |
|---|---|---|---|---|---|---|
| Type of Household | <$15,000 | $15-$24,999 | $25-$59,999 | $60,000+ | TOTAL | % |
| Single family detached | 3,462 | 5,309 | 26,869 | 27,916 | 63,557 | 86.5% |
| Single family attached | 606 | 683 | 2,273 | 883 | 4,445 | 6.1% |
| Low-rise apartment | 315 | 485 | 540 | 47 | 1,387 | 1.9% |
| High-rise apartment | | | 28 | 75 | 103 | 0.1% |
| Mobile home | 684 | 83 | 1,326 | 542 | 2,635 | 3.6% |
| Other | 562 | 165 | 385 | 218 | 1,329 | 1.8% |
| TOTAL | 5,629 | 6,724 | 31,421 | 29,682 | 73,456 | 100.0% |

*Figure 2.13 - Number of Households in the Edmonton Region by Household Income and Type of Household*
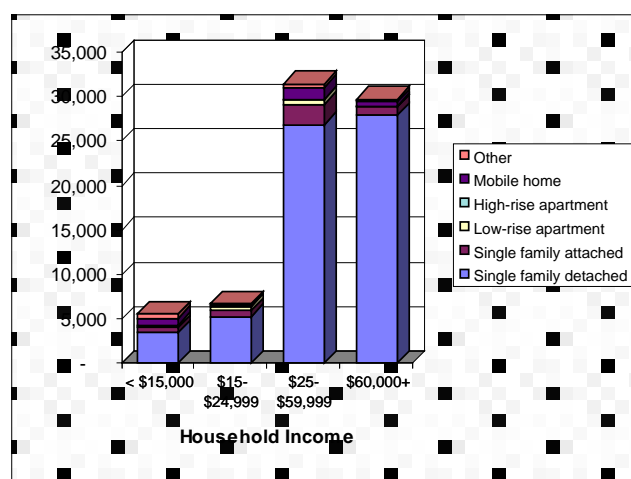


| % | 7.7% | 9.2% | 42.8% | 40.4% | 100.0% |
|---|---|---|---|---|---|

Average household income in the Edmonton Region is higher than that observed for the City of Edmonton. This is evidenced by the higher proportion of households reporting a household of more than $60,000 per year. The households in both the Region and the City had approximately 43% of the households reporting an average income level between $25,000 and $60,000. However, in the Region, the proportion of households reporting an income level in excess of $60,000 was 40.4%, compared to only 25% for the City of Edmonton. As a result, the portion of households in the Region reporting an income level of less than $25,000 per

year was smaller than for the City, 17% versus 32%.

As revealed earlier, single family housing units are the dominate housing type in the Region.  For each income category, single family units comprise the majority of housing units, increasing from approximately 60% for low income households (less than $15,000 per year), to over 90% for high income households (greater than $60,000 per year).

*Table 2.14 - Number of Households in the City of Edmonton by Household Income and Size*

| *City of Edmonton* | Household Income | | | | | |
|---|---|---|---|---|---|---|
| **Household Size (persons)** | <$15,000 | $15-$24,999 | $25-$59,999 | $60,000+ | TOTAL | % |
| 1 | 26,120 | 14,349 | 23,159 | 2,840 | 66,467 | 27.1% |
| 2 | 9,392 | 12,420 | 36,269 | 18,425 | 76,506 | 31.2% |
| 3 | 4,509 | 3,798 | 18,437 | 13,963 | 40,707 | 16.6% |
| 4 | 2,055 | 2,739 | 17,367 | 15,803 | 37,964 | 15.5% |
| 5+ | 1,223 | 1,985 | 10,515 | 9.907 | 23,630 | 9.6% |
| TOTAL | 43,298 | 35,291 | 105,746 | 60,938 | 245,274 | 100.0% |
| % | 17.7% | 31.2% | 16.6% | 15.5% | 100.0% | |

Generally, as household size increases, so does the proportion of households with a higher average household income. For example, single person households comprise approximately 60% of all households with an income of less than $15,000 per year. This proportion decreases to 41% for households with an income of between $15,000 and $25,000, to 22% for households with an income of between $25,000 and $60,000 and to 5% for households with an income greater than $60,000.

*Figure 2.14 - Number of Households in the City of Edmonton by Household Income and Size*
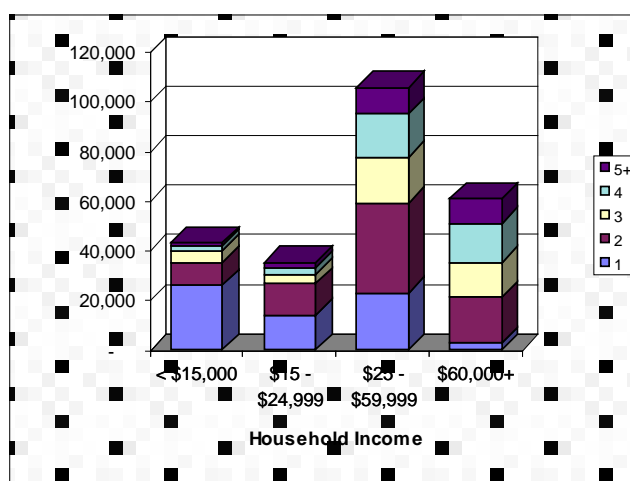


For households with an average annual income greater than $15,000 per year, the proportion of two person households remains fairly constant. Larger households of 3 persons or more, increase to comprise almost half the households where income is between $25,000 and $60,000 per year and almost 70% of households with an income in excess of $60,000 per year.
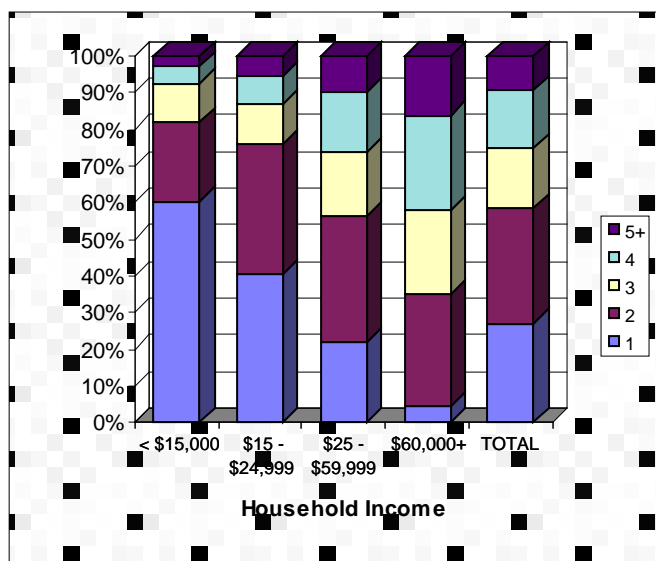
*Table 2.15 - Number of Households in the Edmonton Region by Household Size and Income*

| Edmonton Region | Household Income | | | | | |
|---|---|---|---|---|---|---|
| Household Size (persons) | <$15,000 | $15-$24,999 | $25-$59,999 | $60,000+ | TOTAL | % |
| 1 | 2,806 | 1,674 | 3,138 | 334 | 7,952 | 10.8% |
| 2 | 1,321 | 2,820 | 9,193 | 6,621 | 19,955 | 27.2% |
| 3 | 670 | 813 | 6,372 | 6,621 | 14,477 | 19.7% |
| 4 | 748 | 815 | 8,062 | 10,079 | 19,704 | 26.8% |
| 5+ | 84 | 602 | 4,656 | 6,027 | 11,368 | 15.5% |
| TOTAL | 5,629 | 6,724 | 31,421 | 29,682 | 73,456 | 100.0% |
| % | 7.7% | 9.2% | 42.8% | 40.4% | 100.0% | |

Income levels in the Region are also higher than the City as over 40% of households have an income of $60,000 per year, compared to 25% in the City. In addition, household sizes are larger in the Region. As a result, there is a greater proportion of households with medium to high incomes with large households.

*Figure 2.15 - Number of Households in the Edmonton Region by Household Size and Income*



For example, where the household income is between $25,000 and $60,000 per year, households of three or more persons comprise 60% of all households, compared to 45% for the City of Edmonton. Similarly, households with three or more persons comprised 77% of households with an income of more than $60,000 per year, compared to 65% for the City of Edmonton.
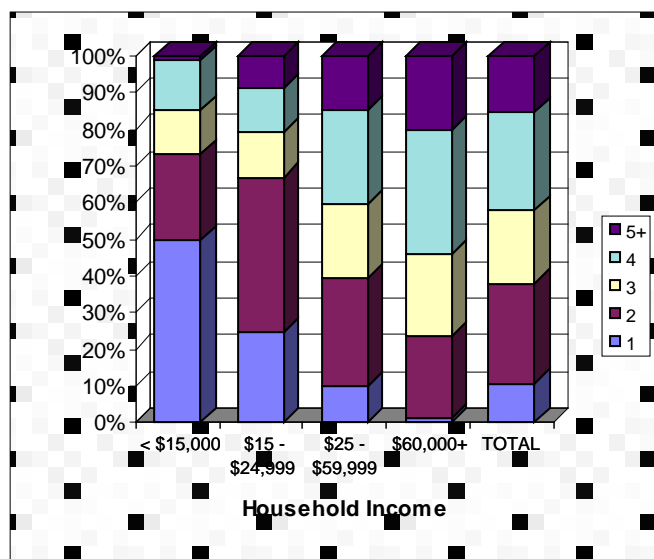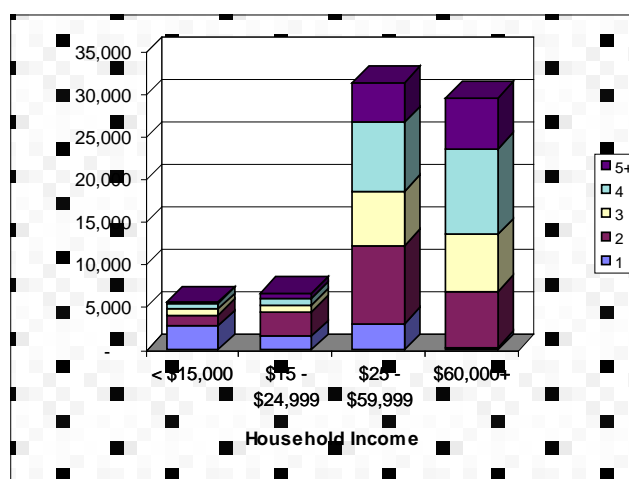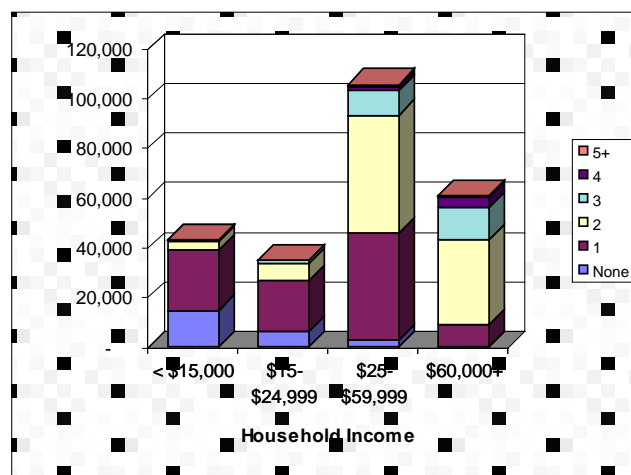
*Table 2.16 - Number of Households in the City of Edmonton by Household Income and Number of Automobiles*

| *City of Edmonton* | Household Income | | | | | |
|---|---|---|---|---|---|---|
| **No. of autos** | < $15,000 | $15 - $24,999 | $25 - $59,999 | $60,000+ | TOTAL | % |
| None | 14,897 | 6,516 | 3,203 | 267 | 24,883 | 10.1% |
| 1 | 24,290 | 20,173 | 43,058 | 8,840 | 96,361 | 39.3% |
| 2 | 3,315 | 7,015 | 47,134 | 34,305 | 91,768 | 37.4% |
| 3 | 738 | 1,462 | 9,853 | 12,723 | 24,776 | 10.1% |
| 4 | 59 | | 1,755 | 3,979 | 5,793 | 2.4% |
| 5 + | | 126 | 743 | 823 | 1,691 | 0.7% |
| TOTAL | 43,298 | 35,291 | 105,746 | 60,938 | 245,274 | 100.0% |
| % | 17.7% | 14.4% | 43.1% | 24.8% | 100.0% | |
| Autos per household | 0.77 | 1.11 | 1.68 | 2.23 | 1.58 | |

As expected, as household income increases, the number of automobiles per household also increases. Where household income was less than $15,000 per year, there are approximately 0.77 automobiles. This increases to 1.11 automobiles per household where income is between $15,000 and $25,000, 1.68 automobiles per household where income is between $25,000 and $60,000 and to 2.23 automobiles per households where income exceeds $60,000 per year.

*Figure 2.16 - Number of Households in the City of Edmonton by Household Income and Number of Automobiles*



Similarly, the number of households without automobiles decreases as income rises. For example, approximately 34% of households with an income of less than $15,000 did not have an automobile. This compares to less than one half of one percent for households with an income greater than $60,000 per year.
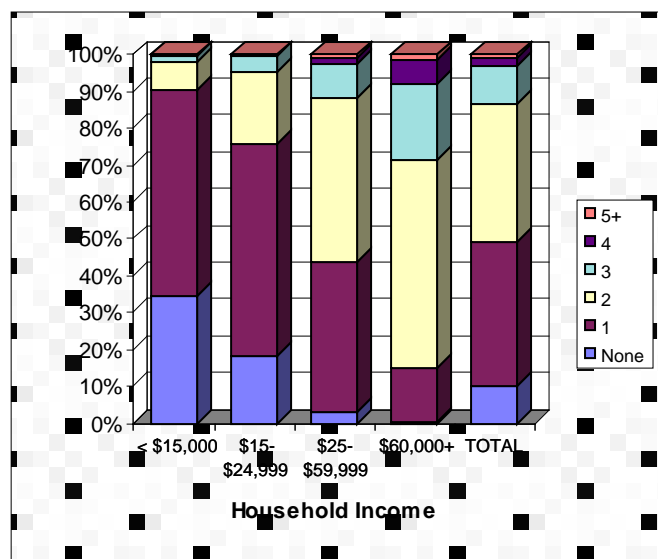
*Table 2.17 - Number of Households in the Edmonton Region by Household Income and Number of Automobiles*

| *Edmonton Region* | **Household Income** | | | | | |
|---|---|---|---|---|---|---|
| **No. of autos** | < $15,000 | $15 - $24,999 | $25 - $59,999 | $60,000+ | TOTAL | % |
| None | 486 | 424 | 70 | 133 | 1,113 | 1.5% |
| 1 | 3,571 | 3,067 | 6,330 | 1,950 | 14,918 | 20.3% |
| 2 | 1,172 | 2,450 | 16,203 | 15,327 | 35,152 | 47.9% |
| 3 | 95 | 631 | 6,645 | 8,130 | 15,501 | 21.1% |
| 4 | 282 | 76 | 1,363 | 2,621 | 4,341 | 5.9% |
| 5 + | 22 | 76 | 811 | 1,522 | 2,431 | 3.3% |
| TOTAL | 5,629 | 6,724 | 31,421 | 29,682 | 73,456 | 100.0% |
| % | 7.7% | 9.2% | 42.8% | 40.4% | 100.0% | |
| Autos per household | 1.32 | 1.57 | 2.18 | 2.57 | 2.21 | |

In the Edmonton Region, as in the City of Edmonton, the number of automobiles is greater with higher household incomes. However, the average number of automobiles available to each household is also greater for each income group in the Region than in the City of Edmonton. For example, households with an income greater than $60,000 had 2.57 automobiles in the Region, compared to 2.23 in the City of Edmonton.

*Figure 2.17 - Number of Households in the Edmonton Region by Household Income and Number of Automobiles*
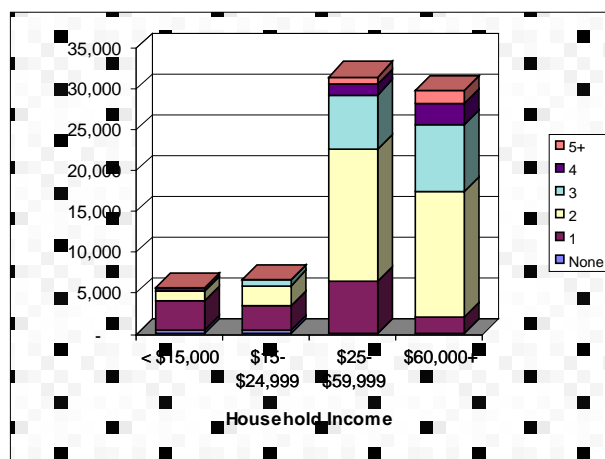


As stated earlier, almost every household in the region has an automobile. The relatively few households without automobiles are concentrated in the low income categories, 9% where household income is less than $15,000 per year, and 6% where income is between $15,000 and $25,000 per year
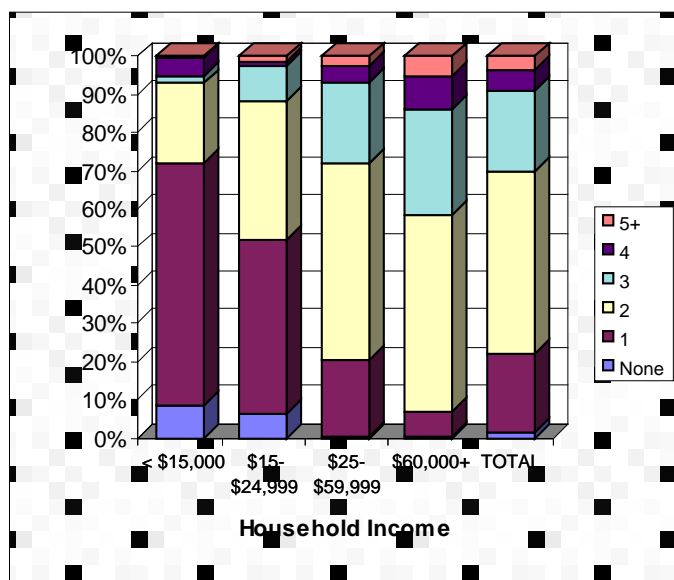
## 2.2 Person Information

### 2.2.1 Age/Gender/Relations

The relationship of each person in the household to the 'head' of the household by age group and gender is presented below. The 'head' of the household is not rigidly defined. In many cases, the head of the household was the person who completed the survey forms for the household. The actual proportion of gender (male versus female) is within the confidence interval reported for the scaled survey data.

*Table 2.18 - Household Relationships by Age and Gender*

| City of Edmonton | Age Group | | | | | Gender | |
|---|---|---|---|---|---|---|---|
| Relations | <16 | 16-64 | 65+ | Total | | Male | Female |
| 1  Head | 84 | 207,655 | 37,341 | 245,081 | 39.3% | 162,927 | 82,154 |
| 2  Spouse/partner | | 134,324 | 13,009 | 147,334 | 23.6% | 17,724 | 129,610 |
| 3  Child | 140,818 | 55,707 | 42 | 196,567 | 31.5% | 100,287 | 96,280 |
| 4  Grandparent | | 452 | 1,037 | 1,489 | 0.2% | 348 | 1,141 |
| 5  Grandchild | 2,524 | 335 | | 2,859 | 0.5% | 1,345 | 1,514 |
| 6  Other relative | 546 | 9,391 | 2,674 | 12,612 | 2.0% | 4,879 | 7,732 |
| 7  Unrelated | 570 | 13,942 | 387 | 14,900 | 2.4% | 7,696 | 7,204 |
| 8  Out of area visitor | 338 | 1,885 | 512 | 2,735 | 0.4% | 1,175 | 1,560 |
| 9  Unknown | | 48 | | 48 | 0.0% | | 48 |
| Total | 144,880 | 423,741 | 55,002 | 623,624 | 100.0% | 296,380 | 327,244 |
| % | 23.2% | 67.9% | 8.8% | 100.0% | | 47.5% | 52.5% |

| Edmonton Region | Age Group | | | | | Gender | |
|---|---|---|---|---|---|---|---|
| Relations | <16 | 16-64 | 65+ | Total | | Male | Female |
| 1  Head | | 66,299 | 7,157 | 73,456 | 31.5% | 61,818 | 11,638 |
| 2  Spouse/partner | | 57,265 | 2,584 | 59,849 | 25.7% | 3,487 | 56,362 |
| 3  Child | 67,496 | 25,742 | | 93,238 | 40.0% | 47,689 | 45,549 |
| 4  Grandparent | | 87 | 368 | 455 | 0.2% | 154 | 301 |
| 5  Grandchild | 351 | 148 | | 499 | 0.2% | 359 | 140 |
| 6  Other relative | 234 | 1,381 | 979 | 2,595 | 1.1% | 1,048 | 1,547 |
| 7  Unrelated | 492 | 1,925 | 28 | 2,445 | 1.0% | 1,421 | 1,023 |
| 8  Out of area visitor | 416 | 332 | | 748 | 0.3% | 371 | 376 |
| 9  Unknown | | | | | 0.0% | | |
| Total | 68,989 | 153,179 | 11,117 | 233,286 | 100.0% | 116,348 | 116,937 |
| % | 29.6% | 65.7% | 4.8% | 100.0% | | 49.9% | 50.1% |

### 2.2.2  Primary Employment or School Status

Primary employment or school status is defined as the primary activity which each person does on a typical week-day.

*Table 2.19 - Primary Employment Status by Age Group and Gender of Persons in the City of Edmonton*

| *City of Edmonton* | Age Group | | | | | Gender | |
|---|---|---|---|---|---|---|---|
| **Primary Status** | <16 | 16-64 | 65+ | Total | % | Male | Female |
| 1  Employed full-time | | 229,274 | 1,774 | 231,048 | 37.0% | 136,354 | 94,694 |
| 2  Employed part-time | | 48,559 | 1,322 | 49,881 | 8.0% | 11,831 | 38,050 |
| 3  Unemployed | 84 | 24,200 | 343 | 24,628 | 3.9% | 12,856 | 11,771 |
| 4  Retired | | 24,986 | 48,666 | 73,652 | 11.8% | 31,930 | 41,722 |
| 5  Homemaker | | 30,264 | 2,855 | 33,119 | 5.3% | 349 | 32,771 |
| 6  Pre-schooler | 40,273 | | | 40,273 | 6.5% | 19,901 | 20,372 |
| 7  Kindergarten/elementary | 70,219 | | | 70,219 | 11.3% | 34,535 | 35,684 |
| 8  Junior high student | 25,696 | 127 | | 25,823 | 4.1% | 13,700 | 12,123 |
| 9  Senior high student | 7,459 | 17,586 | | 25,045 | 4.0% | 12,867 | 12,178 |
| 10  Post-secondary | | 41,056 | | 41,056 | 6.6% | 18,217 | 22,839 |
| 11  Other | 1,150 | 7,689 | 42 | 8,880 | 1.4% | 3,840 | 5,040 |
| Total | 144,880 | 423,741 | 55,002 | 623,624 | 100.0% | 296,380 | 327,244 |
| % | 23.2% | 67.9% | 8.8% | 100.0% | | 47.5% | 52.5% |

*Figure 2.18 - Primary Employment Status by Age Group and Gender of Persons in the City of Edmonton*
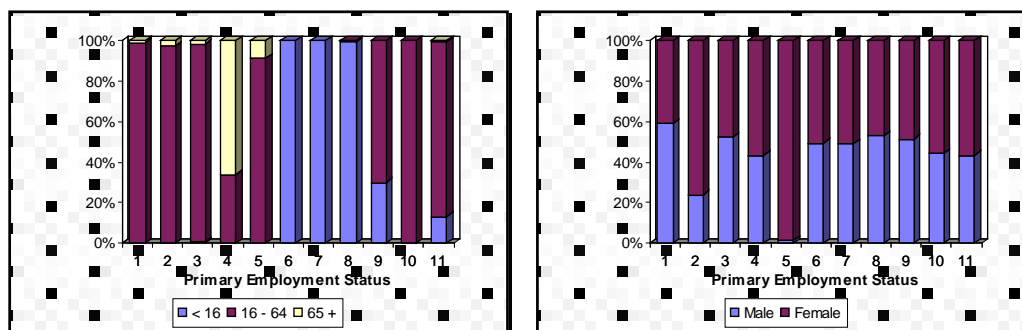


*Table 2.20 - Licenced Drivers by Primary Status/Age Group/Gender (City of Edmonton)*

| *City of Edmonton* | Age Group | | | | % of drivers | % of persons | Gender | |
|---|---|---|---|---|---|---|---|---|
| **Primary Status** | <16 | 16-64 | 65+ | Total | | | Male | Female |
| 1  Employed full-time | | 219,555 | 1,728 | 221,283 | 52.6% | 95.8% | 132,380 | 88,903 |
| 2  Employed part-time | | 43,531 | 1,322 | 44,854 | 10.7% | 89.9% | 10,652 | 34,201 |
| 3  Unemployed | | 19,287 | 58 | 19,344 | 4.6% | 78.5% | 10,763 | 8,582 |
| 4  Retired | | 21,749 | 34,464 | 56,214 | 13.4% | 76.3% | 29,534 | 26,680 |
| 5  Homemaker | | 25,855 | 2,052 | 27,907 | 6.6% | 84.3% | 349 | 27,559 |
| 8  Junior high student | | 47 | | 47 | 0.0% | 0.2% | 47 | |
| 9  Senior high student | | 9,166 | | 9,166 | 2.2% | 36.6% | 4,592 | 4,574 |
| 10  Post-secondary | | 36,652 | | 36,652 | 8.7% | 89.3% | 16,315 | 20,337 |
| 11  Other | | 5,414 | | 5,414 | 1.3% | 61.0% | 2,899 | 2,514 |
| Total | 0 | 381,256 | 39,624 | 420,880 | 100.0% | 67.5% | 207,530 | 213,350 |
| % of drivers | 0.0% | 90.6% | 9.4% | 100.0% | | | 49.3% | 50.7% |
| % of persons | 0.0% | 90.0% | 72.0% | 67.5% | | | 70.0% | 65.2% |

*Table 2.21 - Primary Employment Status by Age Group and Gender of Persons in the Edmonton Region*

| *Edmonton Region* | Age Group | | | | | Gender | |
|---|---|---|---|---|---|---|---|
| **Primary Status** | <16 | 16-64 | 65+ | Total | % | Male | Female |
| 1   Employed full-time | | 87,278 | 570 | 87,848 | 37.7% | 56,933 | 30,915 |
| 2   Employed part-time | | 17,802 | 229 | 18,031 | 7.7% | 2,917 | 15,114 |
| 3   Unemployed | | 7,157 | | 7,157 | 3.1% | 3,776 | 3,381 |
| 4   Retired | | 6,340 | 9,950 | 16,289 | 7.0% | 8,253 | 8,036 |
| 5   Homemaker | | 15,430 | 340 | 15,770 | 6.8% | 40 | 15,730 |
| 6   Pre-schooler | 15,453 | | | 15,453 | 6.6% | 7,918 | 7,535 |
| 7   Kindergarten/elementary | 34,344 | | | 34,344 | 14.7% | 17,323 | 17,022 |
| 8   Junior high student | 14,087 | | | 14,087 | 6.0% | 7,353 | 6,734 |
| 9   Senior high student | 4,737 | 9,302 | | 14,039 | 6.0% | 7,530 | 6,509 |
| 10  Post-secondary | | 7,830 | | 7,830 | 3.4% | 3,021 | 4,810 |
| 11  Other | 369 | 2,040 | 28 | 2,436 | 1.0% | 1,285 | 1,151 |
| Total | 68,989 | 153,179 | 11,117 | 233,286 | 100.0% | 116,348 | 116,937 |
| | 29.6% | 65.7% | 4.8% | 100.0% | | 49.9% | 50.1% |

*Figure 2.19 - Primary Employment Status by Age Group and Gender of Persons in the Edmonton Region*
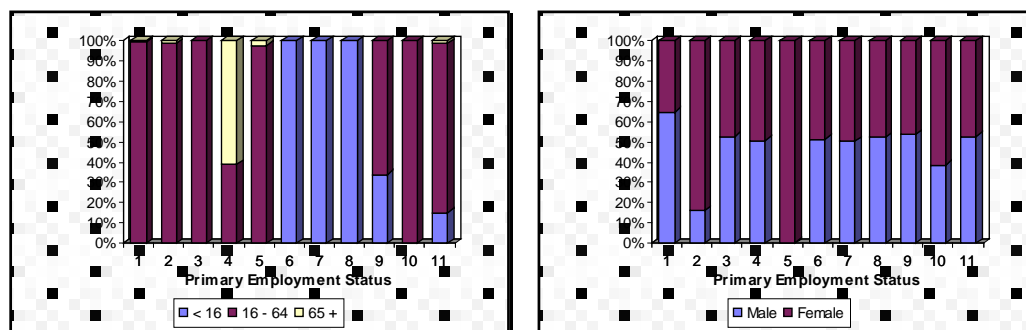


*Table 2.22 - Licenced Drivers by Primary Status/Age Group/Gender (Edmonton Region)*

| *Edmonton Region* | Age Group | | | | | | Gender | |
|---|---|---|---|---|---|---|---|---|
| **Primary Status** | <16 | 16-64 | 65+ | Total | % of drivers | % of persons | Male | Female |
| 1   Employed full-time | | 86,083 | 570 | 86,653 | 56.0% | 98.6% | 56,445 | 30,207 |
| 2   Employed part-time | | 17,156 | 229 | 17,385 | 11.2% | 96.4% | 2,673 | 14,712 |
| 3   Unemployed | | 6,457 | | 6,457 | 4.2% | 90.2% | 3,594 | 2,864 |
| 4   Retired | | 5,830 | 7,726 | 13,556 | 8.8% | 83.2% | 7,787 | 5,769 |
| 5   Homemaker | | 14,621 | 214 | 14,835 | 9.6% | 94.1% | 40 | 14,795 |
| 8   Junior high student | | | | 0 | 0.0% | 0.0% | | |
| 9   Senior high student | | 6,365 | | 6,365 | 4.1% | 45.3% | 3,796 | 2,569 |
| 10  Post-secondary | | 7,613 | | 7,613 | 4.9% | 97.2% | 2,931 | 4,682 |
| 11  Other | | 1,916 | 28 | 1,944 | 1.3% | 79.8% | 1,052 | 892 |
| Total | 0 | 146,042 | 8,767 | 154,808 | 100.0% | 66.4% | 78,318 | 76,490 |
| % of drivers | 0.0% | 94.3% | 5.7% | 100.0% | | | 50.6% | 49.4% |
| % of persons | 0.0% | 95.3% | 78.9% | 66.4% | | | 67.3% | 65.4% |

### 2.2.3   Transit Pass Data

A transit pass includes a regular bus pass (City of Edmonton, St. Albert or Sherwood Park), a yellow school bus pass, DATS (Disabled Adult Transportation System) pass or other type of pass.  Examples of other types of bus passes include: passes for private buses, CNIB passengers, and complimentary passes for City staff.

*Table 2.23 - Transit Pass by Age Group and Gender for Persons in the City of Edmonton*

| *City of Edmonton* | **Age Group** | | | | | **Gender** | |
|---|---|---|---|---|---|---|---|
| **Transit Pass** | <16 | 16-64 | 65+ | Total | % | Male | Female |
| Regular transit | 15,986 | 51,764 | 19,677 | 87,427 | 14.0% | 34,146 | 53,281 |
| Yellow school bus | 11,836 | 1,041 | | 12,877 | 2.1% | 6,230 | 6,647 |
| DATS | 90 | 1,151 | 264 | 1,505 | 0.2% | 764 | 782 |
| Other | 100 | 1,218 | 512 | 1,830 | 0.3% | 1,064 | 766 |
| None | 116,868 | 368,567 | 34,550 | 519,985 | 83.4% | 254,175 | 265,768 |
| Total | 144,880 | 423,741 | 55,002 | 623,624 | 100.0% | 296,380 | 327,244 |
| % | 23.2% | 67.9% | 8.8% | 100.0% | | 47.5% | 52.5% |

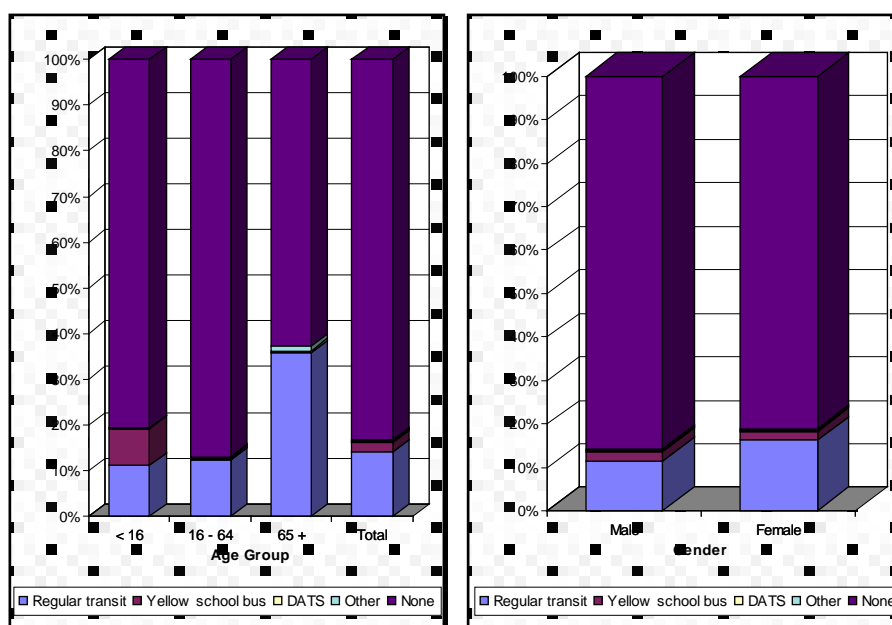*Figure 2.20 - Transit Pass by Age Group and Gender for Persons in the City of Edmonton*



*Table 2.24 - Transit Pass by Age Group and Gender for Persons in the Edmonton Region*

| *Edmonton Region* | **Age Group** | | | | | **Gender** | |
|---|---|---|---|---|---|---|---|
| **Transit Pass** | <16 | 16-64 | 65+ | Total | % | Male | Female |
| Regular transit | 541 | 3,987 | 231 | 4,759 | 2.0% | 2,005 | 2,754 |
| Yellow school bus | 13,937 | 2,281 | 72 | 16,290 | 7.0% | 8,365 | 7,925 |
| DATS | 23 | | | 23 | 0.0% | 23 | |
| Other | 368 | 265 | | 633 | 0.3% | 397 | 236 |
| None | 54,121 | 146,647 | 10,814 | 211,582 | 90.7% | 105,559 | 106,022 |
| Total | 68,989 | 153,179 | 11,117 | 233,286 | 100.0% | 116,348 | 116,937 |
| % | 29.6% | 65.7% | 4.8% | 100.0% | | 49.9% | 50.1% |

## 2.2.4 Persons with Disabilities

Persons with disabilities include any individuals who have a long-term disability or handicap that may make it difficult to travel.

*Table 2.25 - Persons with Disabilities by Age Group and Gender in the City of Edmonton*

| *City of Edmonton* | Age Group | | | | | Gender | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Disability or Handicap** | <16 | 16-64 | 65+ | Total | % | Male | Female |
| Yes, registered DATS user | 159 | 3,145 | 1,552 | 4,856 | 0.8% | 1,909 | 2,947 |
| Yes, not registered DATS user | 1,618 | 10,585 | 3,983 | 16,186 | 2.6% | 7,572 | 8,613 |
| No | 143,104 | 410,011 | 49,467 | 602,582 | 96.6% | 286,898 | 315,683 |
| Total | 144,880 | 423,741 | 55,002 | 623,624 | 100.0% | 296,380 | 327,244 |
| % | 23.2% | 67.9% | 8.8% | 100.0% | | 47.5% | 52.5% |

*Figure 2.21 - Persons with Disabilities by Age Group and Gender in the City of Edmonton*
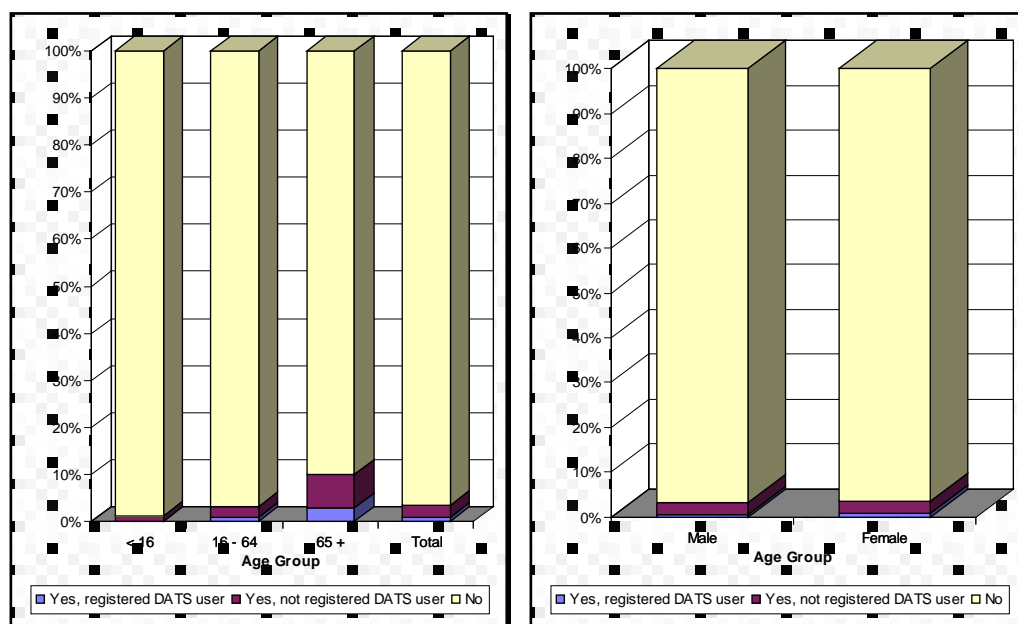


*Table 2.26 - Persons with Disabilities by Age Group and Gender in the Edmonton Region*

| *Edmonton Region* | Age Group | | | | | Gender | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Disability or Handicap** | <16 | 16-64 | 65+ | Total | % | Male | Female |
| Yes, registered DATS user | | 214 | 43 | 257 | 0.1% | 70 | 186 |
| Yes, not registered DATS user | 631 | 3,109 | 1,439 | 5,179 | 2.2% | 2,381 | 2,798 |
| No | 68,358 | 149,857 | 9,635 | 227,850 | 97.7% | 113,897 | 113,953 |
| Total | 68,989 | 153,179 | 11,117 | 233,286 | 100.0% | 116,348 | 116,937 |
| % | 29.6% | 65.7% | 4.8% | 100.0% | | 49.9% | 50.1% |

## 2.3 Employment

### 2.3.1 Employed Labour Force

The employed labour force is defined as individuals 16 years of age and older who were, at the time of the survey, employed in either a full-time or part-time job.

*Table 2.27 - Employed Labour Force in the Edmonton CMA*

| Regional Zone | Households | % | Employed Labour Force | % | Employees per household |
|---|---|---|---|---|---|
| 1 CBD | 4,251 | 1.7% | 3,550 | 1.2% | 0.83 |
| 2 University | 4,355 | 1.8% | 3,610 | 1.2% | 0.83 |
| 3 CBD Fringe | 25,099 | 10.2% | 22,850 | 7.6% | 0.91 |
| 4 Northwest-Inner | 18,441 | 7.5% | 19,440 | 6.5% | 1.05 |
| 5 Northeast-Inner | 35,806 | 14.6% | 43,180 | 14.4% | 1.21 |
| 6 Southeast-Inner | 28,035 | 11.4% | 29,710 | 9.9% | 1.06 |
| 7 Southwest-Inner | 22,184 | 9.0% | 26,700 | 8.9% | 1.20 |
| 8 West-Inner | 22,873 | 9.3% | 25,850 | 8.6% | 1.13 |
| 9 Northwest-Suburb | 11,623 | 4.7% | 17,190 | 5.7% | 1.48 |
| 10 Northeast-Suburb | 13,976 | 5.7% | 21,190 | 7.1% | 1.52 |
| 11 Southeast-Suburb | 26,420 | 10.8% | 41,440 | 13.8% | 1.57 |
| 12 Southwest-Suburb | 13,744 | 5.6% | 18,080 | 6.0% | 1.32 |
| 13 West-Suburb | 18,468 | 7.5% | 27,640 | 9.2% | 1.50 |
| Total - City | 245,275 | 100.0% | 19,600 | 17.3% | 1.22 |
| 14 Sherwood Park | 11,952 | 16.3% | 23,390 | 20.7% | 1.64 |
| 15 St. Albert | 14,013 | 19.1% | 30,900 | 27.3% | 1.67 |
| 16 Region-urban | 20,371 | 27.7% | 39,130 | 34.6% | 1.52 |
| 17 Region-rural | 27,120 | 36.9% | 300,430 | 100.0% | 1.44 |
| Total - Region | 73,456 | 100.0% | 113,020 | 100.0% | 1.54 |
| Total - CMA | 318,731 | | 413,450 | | 1.30 |

*Figure 2.22 - Employed Labour Force in the Edmonton CMA*
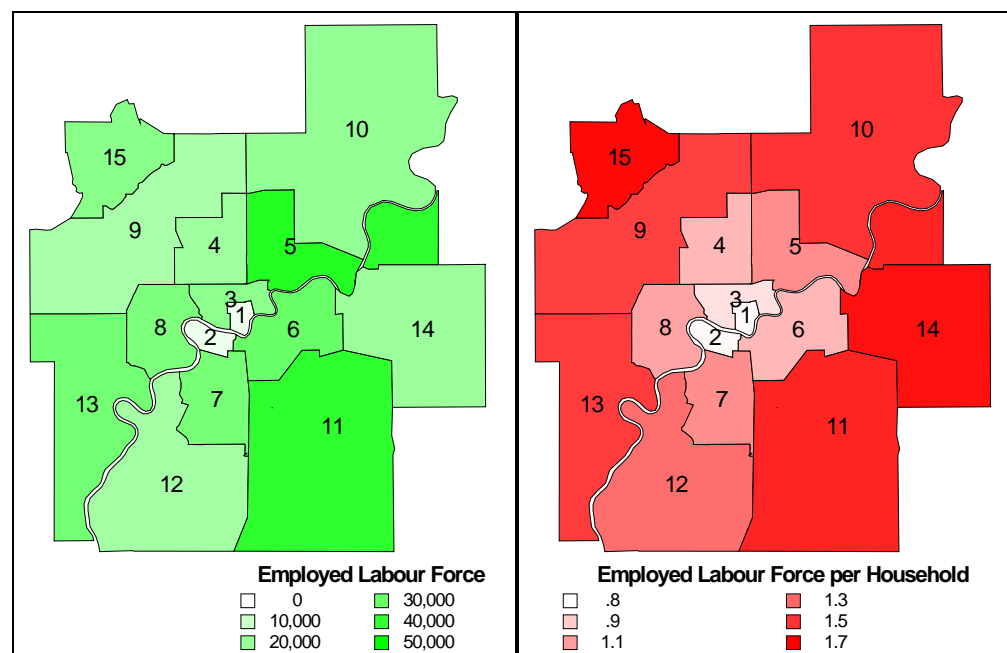
### 2.3.2 Place of Employment

Employment is defined as a full-time or part-time job which employs a person who is 16 years of age or older.  These numbers do not include persons living outside the CMA.

*Table 2.28 - Employment in the Edmonton CMA*

| Regional Zone | Employment (Place of Work) | % | Employees (place of work / place of residence) |
|---|---|---|---|
| 1 CBD | 62,310 | 19.0% | 17.55 |
| 2 University | 20,500 | 6.3% | 5.68 |
| 3 CBD Fringe | 33,150 | 10.1% | 1.45 |
| 4 Northwest-Inner | 22,950 | 7.0% | 1.18 |
| 5 Northeast-Inner | 22,650 | 6.9% | 0.52 |
| 6 Southeast-Inner | 23,250 | 7.1% | 0.78 |
| 7 Southwest-Inner | 18,030 | 5.5% | 0.68 |
| 8 West-Inner | 13,420 | 4.1% | 0.52 |
| 9 Northwest-Suburb | 39,440 | 12.1% | 2.29 |
| 10 Northeast-Suburb | 7,460 | 2.3% | 0.35 |
| 11 Southeast-Suburb | 45,890 | 14.0% | 1.11 |
| 12 Southwest-Suburb | 5,860 | 1.8% | 0.32 |
| 13 West-Suburb | 12,260 | 3.7% | 0.44 |
| Total - City | 327,170 | 100.0% | 1.09 |
| 14 Sherwood Park | 13,940 | 19.7% | 0.71 |
| 15 St. Albert | 12,210 | 17.3% | 0.52 |
| 16 Region-urban | 21,940 | 31.0% | 0.71 |
| 17 Region-rural | 22,690 | 32.1% | 0.58 |
| Total - Region | 70,780 | 100.0% | 0.63 |
| Location varies in CMA | 7,170 | 1.7% | |
| Employed outside CMA | 8,350 | 2.0% | |
| Total Employment | 413,470 | | |
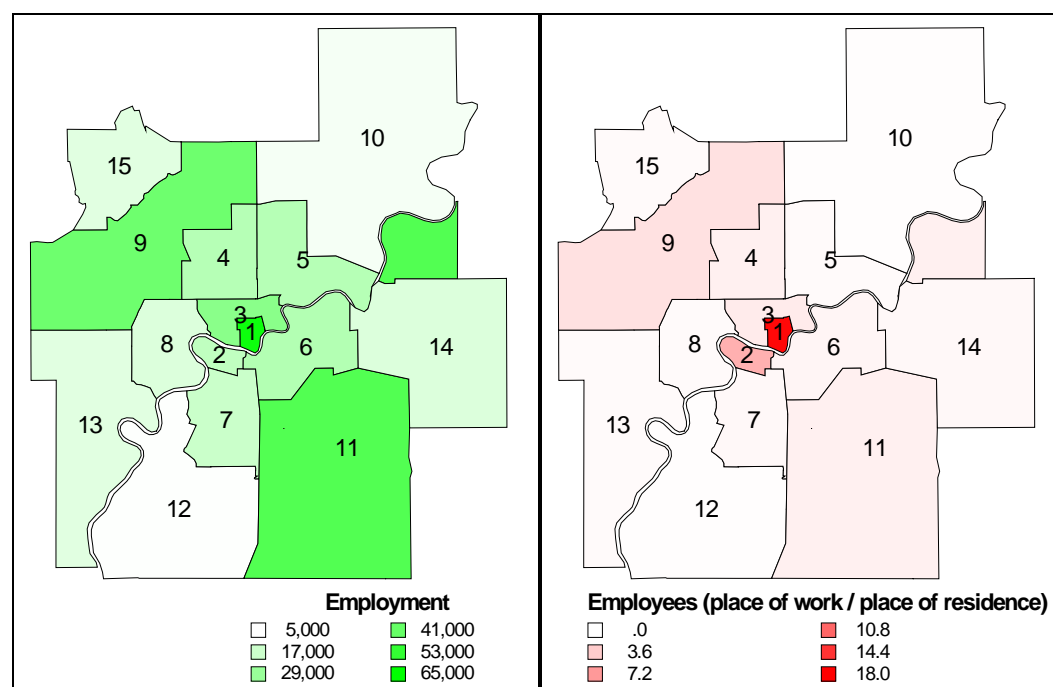
### 2.3.3  Employment Type and Travel Information

The proportion of workers in each Employment Sector for both the City and Region reflects the diverse nature of employment in the study area.   While many of the categories exhibit a similar proportion in both the City and Region, there are some differences of note.   The City of Edmonton has a relatively higher proportion in the service sectors (Retail, Food/Lodging/Entertainment, Business/Personal services).   The Region has a relatively higher proportion in the agricultural sectors (Primary Industries, Agriculture) and construction.

*Table 2.29 - Sector of Employment*

| Employment Sector | City of Edmonton | | Edmonton Region | |
|---|---|---|---|---|
| n/a | 3,110 | 1.0% | 930 | 2.8% |
| Retail | 35,430 | 11.8% | 11,800 | 10.4% |
| Food/Lodging/Entertainment | 24,610 | 8.2% | 5,390 | 4.8% |
| Business/Personal services | 34,570 | 11.5% | 10,000 | 8.8% |
| Finance/Insurance/Real estate | 13,170 | 4.4% | 4,960 | 4.4% |
| Wholesale/Trade | 11,380 | 3.8% | 3,840 | 3.4% |
| Manufacturing | 16,140 | 5.4% | 7,620 | 6.7% |
| Construction | 17,280 | 5.8% | 9,260 | 8.2% |
| Primary Industries | 9,630 | 3.2% | 7,210 | 6.4% |
| Transportation/Communications/Utilities | 25,780 | 8.6% | 10,010 | 8.9% |
| Government | 31,760 | 10.6% | 10,000 | 8.8% |
| Education | 27,470 | 9.1% | 11,110 | 9.8% |
| Hospital | 14,810 | 4.9% | 4,090 | 3.6% |
| Non-hospital health services | 12,060 | 4.0% | 5,200 | 4.6% |
| Agriculture | 1,470 | 0.5% | 3,860 | 3.4% |
| Other | 21,760 | 7.2% | 7,730 | 6.8% |
| TOTAL | 300,430 | 100.0% | 113,010 | 100.0% |

Some of the Employment Sector differences between the City and the Region also manifest themselves in the Occupation categories.   For example, the City has a higher proportion of persons in the Sale of Commodities, Sale of Services and Service occupation categories, reflecting the greater dependence on the retail and service sector as a generator of employment.   The Region has higher proportion of occupations in Construction trades and Resource collecting (agriculture and primary industries).

*Table 2.30 - Occupation of Employment*

| Occupation of Employment | City of Edmonton | % | Edmonton Region | % |
|---|---|---|---|---|
| n/a | 3,190 | 1.1% | 1,290 | 1.1% |
| Managerial/Professional | 78,380 | 26.1% | 29,530 | 26.1% |
| Teaching - grade school | 11,460 | 3.8% | 6,730 | 6.0% |
| Teaching - post-secondary | 6,030 | 2.0% | 1,450 | 1.3% |
| Sale of Commodities | 28,530 | 9.5% | 7,960 | 7.0% |
| Sale of Services | 12,560 | 4.2% | 4,200 | 3.7% |
| Service | 41,880 | 13.9% | 14,290 | 12.6% |
| Clerical | 36,050 | 12.0% | 12,400 | 11.0% |
| Construction trades | 17,430 | 5.8% | 8,470 | 7.5% |
| Resource collector | 2,600 | 0.9% | 4,900 | 4.3% |
| Processing/manufacturing | 10,490 | 3.5% | 3,290 | 2.9% |
| Equipment operator | 4,600 | 1.5% | 2,070 | 1.8% |
| Transportation | 7,720 | 2.6% | 3,940 | 3.5% |
| Handling | 3,340 | 1.1% | 920 | 0.8% |
| Other | 29,980 | 10.0% | 9,240 | 8.2% |
| Not classifiable | 6,180 | 2.1% | 2,340 | 2.1% |
| TOTAL | 300,420 | 100.0% | 113,020 | 100.0% |

Approximately 80% of those employed worked on their travel day. The survey was conducted for Monday through Friday. The remaining 20 percent reflects both the part time persons employed who may not have worked on the assigned travel day and those who may not have been able to work on their travel day due to illness or some other reason. Approximately 1% of employed individuals in the City and 1.6% in the Region worked at home on the assigned travel day.

*Table 2.31 - Employee Work Status*

| Did employee work on the travel day? | City of Edmonton | % | Edmonton Region | % |
|---|---|---|---|---|
| n/a | 2,710 | 0.9% | 850 | 0.8% |
| Worked on travel day | 241,050 | 80.2% | 89,350 | 79.1% |
| Did not work on travel day | 53,770 | 17.9% | 21,050 | 18.6% |
| Worked at home on travel day | 2,890 | 1.0% | 1,770 | 1.6% |
| TOTAL | 300,420 | 100.0% | 113,020 | 100.0% |

Four out of five employed persons have a specific time at which they must be at work. The remaining one in five employees have some flexibility in their scheduled work hours.

*Table 2.32 - Employees who have a specific time to start work*

| Is the employee required to be at work at a specific time? | City of Edmonton | % | Edmonton Region | % |
|---|---|---|---|---|
| n/a | 5,140 | 1.7% | 2,210 | 2.0% |
| Yes | 240,050 | 79.9% | 88,770 | 78.6% |
| No | 55,230 | 18.4% | 22,030 | 19.5% |
| TOTAL | 300,420 | 100.0% | 113,010 | 100.0% |

A relatively high proportion of persons employed also had some flexibility in changing their time for starting work on a regular basis. This proportion was almost the same for both the City and Region (32% and 33% respectively).

*Table 2.33 - Employees with flexibility in work start time*

| Can employee begin work later on a regular basis? | City of Edmonton | % | Edmonton Region | |
|---|---|---|---|---|
| No response | 21,290 | 7.1% | 9,420 | 8.3% |
| Yes | 95,500 | 31.8% | 36,800 | 32.6% |
| No | 183,630 | 61.1% | 66,800 | 59.1% |
| TOTAL | 300,420 | 100.0% | 113,020 | 100.0% |

### 2.3.4  Vehicles and the Workplace

A majority of persons employed indicated that they never "need a car at work". Almost another 20% indicated that they only need their car at work "infrequently". Another one in only a quarter of the employees in the study area frequently need their car as part of the work they do. People who work in the University area indicated that they "needed" their car at work the least.

*Table 2.34 - Number of Employees Who Need a Car at Work by Place of Employment*

| | Regional Zone | n/a | Do you need your car at work as part of the work you do? | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| | | | Frequently | | Infrequently | | Never | | |
| 1 | CBD | 370 | 11,240 | 18.0% | 15,170 | 24.3% | 35,530 | 57.0% | 62,310 |
| 2 | University | 90 | 1,960 | 9.6% | 4,190 | 20.4% | 14,250 | 69.5% | 20,490 |
| 3 | CBD Fringe | 80 | 9,490 | 28.6% | 7,010 | 21.1% | 16,570 | 50.0% | 33,150 |
| 4 | Northwest-Inner | 310 | 5,100 | 22.2% | 4,580 | 20.0% | 12,950 | 56.5% | 22,940 |
| 5 | Northeast-Inner | 90 | 5,220 | 23.0% | 4,440 | 19.6% | 12,900 | 57.0% | 22,650 |
| 6 | Southeast-Inner | 270 | 5,830 | 25.1% | 5,440 | 23.4% | 11,720 | 50.4% | 23,260 |
| 7 | Southwest-Inner | 170 | 4,440 | 24.6% | 3,300 | 18.3% | 10,110 | 56.1% | 18,020 |
| 8 | West-Inner | 30 | 3,950 | 29.5% | 2,450 | 18.3% | 6,980 | 52.1% | 13,410 |
| 9 | Northwest-Suburb | 160 | 13,760 | 34.9% | 6,950 | 17.6% | 18,580 | 47.1% | 39,450 |
| 10 | Northeast-Suburb | 200 | 2,620 | 35.1% | 810 | 10.9% | 3,830 | 51.3% | 7,460 |
| 11 | Southeast-Suburb | 520 | 13,480 | 29.4% | 8,990 | 19.6% | 22,900 | 49.9% | 45,890 |
| 12 | Southwest-Suburb | 50 | 1,750 | 29.9% | 690 | 11.8% | 3,360 | 57.4% | 5,850 |
| 13 | West-Suburb | 170 | 2,260 | 18.4% | 1,370 | 11.2% | 8,450 | 69.0% | 12,250 |
| | Total - City | 2,510 | 81,100 | 24.8% | 65,390 | 20.0% | 178,130 | 54.5% | 327,130 |
| 14 | Sherwood Park | 0 | 4,690 | 33.6% | 2,230 | 16.0% | 7,030 | 50.4% | 13,950 |
| 15 | St. Albert | 300 | 3,160 | 25.9% | 2,080 | 17.0% | 6,660 | 54.6% | 12,200 |
| 16 | Region-urban | 120 | 5,390 | 24.6% | 4,850 | 22.1% | 11,580 | 52.8% | 21,940 |
| 17 | Region-rural | 460 | 7,040 | 31.0% | 4,760 | 21.0% | 10,430 | 46.0% | 22,690 |
| | Total - Region | 880 | 20,280 | 28.7% | 13,920 | 19.7% | 35,700 | 50.4% | 70,780 |
| | Other | 2,890 | 4,310 | 27.8% | 1,670 | 10.8% | 6,650 | 42.8% | 15,520 |
| | TOTAL | 6,280 | 105,690 | 25.6% | 80,980 | 19.6% | 220,480 | 53.3% | 413,430 |

Only about one out of every three employees who work in the University area (Zone 2) indicated that they need their car as part of their work. In the majority of the other zones, including the CBD, generally about half the employees said they need their car.

In terms of needing their car frequently, only 10% of employees working in the University area and 18% of employees who work in the CBD indicated that they often

need their car for work. On average, 25% of all employees said that they frequently require the use of their automobile for work-related (or other) trip purposes.

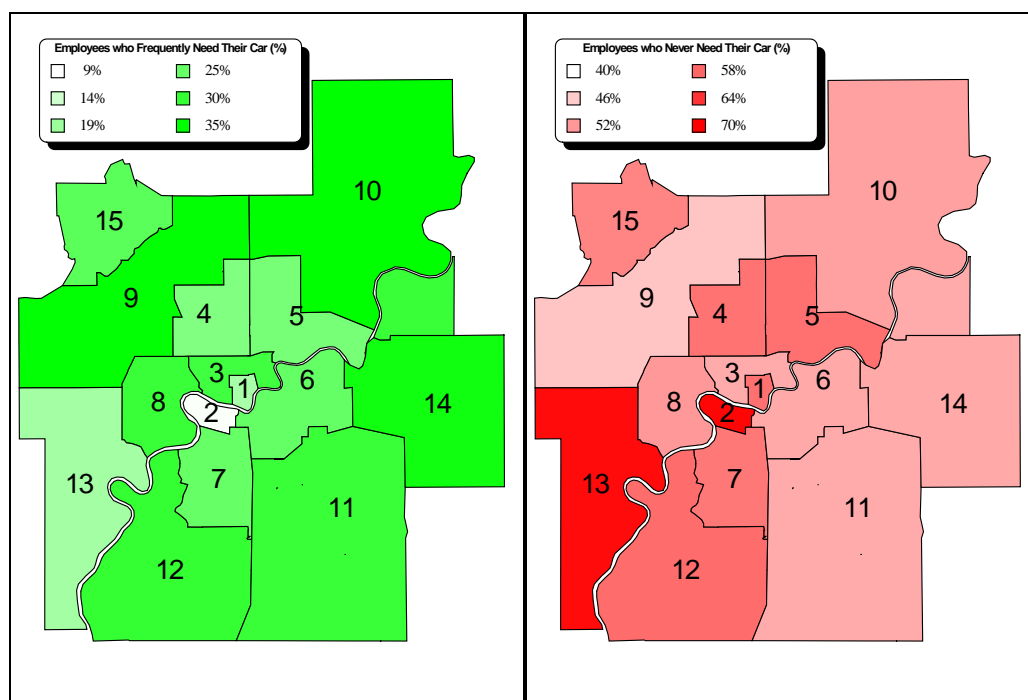*Figure 2.23 - % of Employees Who Need a Car at Work*



*Table 2.35 - Number of Employees with Employer Provided Parking by Place of Employment*

| | Regional Zone | No response | Parking provided on-site | | Parking provided off-site | | Parking provided but don't use it | | No parking provided | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CBD | 450 | 23,150 | 37.2% | 6,660 | 10.7% | 5,570 | 8.9% | 26,470 | 42.5% | 62,300 |
| 2 | University | 150 | 10,640 | 51.9% | 3,940 | 19.2% | 3,110 | 15.2% | 2,650 | 12.9% | 20,490 |
| 3 | CBD Fringe | 940 | 21,910 | 66.1% | 3,890 | 11.7% | 1,320 | 4.0% | 5,080 | 15.3% | 33,140 |
| 4 | NW-Inner | 760 | 16,830 | 73.3% | 2,990 | 13.0% | 980 | 4.3% | 1,390 | 6.1% | 22,950 |
| 5 | NE-Inner | 720 | 13,980 | 61.7% | 4,100 | 18.1% | 1,330 | 5.9% | 2,520 | 11.1% | 22,650 |
| 6 | SE-Inner | 790 | 16,420 | 70.7% | 3,170 | 13.6% | 930 | 4.0% | 1,930 | 8.3% | 23,240 |
| 7 | SW-Inner | 690 | 13,000 | 72.1% | 2,160 | 12.0% | 910 | 5.0% | 1,280 | 7.1% | 18,040 |
| 8 | West-Inner | 500 | 9,300 | 69.4% | 1,130 | 8.4% | 1,140 | 8.5% | 1,340 | 10.0% | 13,410 |
| 9 | NW-Suburb | 440 | 30,030 | 76.1% | 5,240 | 13.3% | 1,230 | 3.1% | 2,500 | 6.3% | 39,440 |
| 10 | NE-Suburb | 570 | 5,520 | 74.0% | 620 | 8.3% | 220 | 2.9% | 530 | 7.1% | 7,460 |
| 11 | SE-Suburb | 1,060 | 36,420 | 79.4% | 4,860 | 10.6% | 1,170 | 2.6% | 2,370 | 5.2% | 45,880 |
| 12 | SW-Suburb | 670 | 3,660 | 62.4% | 740 | 12.6% | 150 | 2.6% | 650 | 11.1% | 5,870 |
| 13 | West-Suburb | 510 | 8,080 | 65.9% | 1,530 | 12.5% | 930 | 7.6% | 1,220 | 9.9% | 12,270 |
| | Total - City | 8,250 | 208,940 | 63.9% | 41,030 | 12.5% | 18,990 | 5.8% | 49,930 | 15.3% | 327,140 |
| 14 | Sherwood Park | 860 | 10,420 | 74.7% | 1,510 | 10.8% | 360 | 2.6% | 790 | 5.7% | 13,940 |
| 15 | St. Albert | 530 | 8,750 | 71.7% | 2,050 | 16.8% | 40 | 0.3% | 830 | 6.8% | 12,200 |
| 16 | Region-urban | 800 | 16,530 | 75.3% | 3,350 | 15.3% | 440 | 2.0% | 820 | 3.7% | 21,940 |
| 17 | Region-rural | 1,570 | 16,740 | 73.8% | 3,020 | 13.3% | 380 | 1.7% | 980 | 4.3% | 22,690 |
| | Total - Region | 3,760 | 52,440 | 74.1% | 9,930 | 14.0% | 1,220 | 1.7% | 3,420 | 4.8% | 70,770 |
| | Other | 3,690 | 7,830 | 50.5% | 2,020 | 13.0% | 220 | 1.4% | 1,750 | 11.3% | 15,510 |
| | TOTAL | 15,700 | 269,210 | 65.1% | 52,980 | 12.8% | 20,430 | 4.9% | 55,100 | 13.3% | 413,420 |

On average, nearly 78% of all employers offer on-site or off-site parking to employees who use the parking. However, in the CBD area, only 48% of employers offered parking to employees who used the parking.

City-wide, only 6% of all employees did not use parking that was offered by their employer. In the University area however, nearly three times as many employees as the city-wide average chose not to use parking which was available from the employer.

Information was also gathered about whether employees paid for the parking which was provided parking by their employers.

*Table 2.36 - Number of Employees who Paid for Employer Provided Parking*

| | Regional Zone | Paid for parking | | Did not pay for parking | | TOTAL |
|---|---|---|---|---|---|---|
| 1 | CBD | 22,750 | 64.3% | 12,640 | 35.7% | 35,390 |
| 2 | University | 13,350 | 75.4% | 4,350 | 24.6% | 17,700 |
| 3 | CBD Fringe | 10,600 | 39.1% | 16,520 | 60.9% | 27,120 |
| 4 | Northwest-Inner | 6,380 | 30.7% | 14,420 | 69.3% | 20,800 |
| 5 | Northeast-Inner | 2,480 | 12.8% | 16,930 | 87.2% | 19,410 |
| 6 | Southeast-Inner | 2,970 | 14.5% | 17,560 | 85.5% | 20,530 |
| 7 | Southwest-Inner | 2,900 | 18.0% | 13,170 | 82.0% | 16,070 |
| 8 | West-Inner | 3,100 | 26.8% | 8,470 | 73.2% | 11,570 |
| 9 | Northwest-Suburb | 2,250 | 6.2% | 34,250 | 93.8% | 36,500 |
| 10 | Northeast-Suburb | 1,500 | 23.6% | 4,850 | 76.4% | 6,350 |
| 11 | Southeast-Suburb | 3,390 | 8.0% | 39,070 | 92.0% | 42,460 |
| 12 | Southwest-Suburb | 180 | 4.0% | 4,360 | 96.0% | 4,540 |
| 13 | West-Suburb | 490 | 4.6% | 10,050 | 95.4% | 10,540 |
| | Total - City | 72,340 | 26.9% | 196,640 | 73.1% | 268,980 |
| 14 | Sherwood Park | 230 | 1.9% | 12,060 | 98.1% | 12,290 |
| 15 | St. Albert | 1,160 | 10.7% | 9,690 | 89.3% | 10,850 |
| 16 | Region-urban | 500 | 2.5% | 19,820 | 97.5% | 20,320 |
| 17 | Region-rural | 480 | 2.4% | 19,660 | 97.6% | 20,140 |
| | Total - Region | 2,370 | 3.7% | 61,230 | 96.3% | 63,600 |
| | Other | 750 | 7.4% | 9,320 | 92.6% | 10,070 |
| | TOTAL | 75,460 | 22.0% | 267,190 | 78.0% | 342,650 |

In the City of Edmonton, three out of every four employees do not pay for parking which is provided by their employer. However, in the University area, the reverse is true whereby three out of every four employees indicated that they *pay* for their parking. In the CBD, about 64% of all employees said that they also paid for the parking which is provided by their employer.

# 3. Trip Generation

T he City of Edmonton Household Travel Survey collected information on all trips generated by all persons residing in the surveyed household during a 24 hour period. This section of the report describes the various characteristics of these trips in terms of the:

- number of trips generated,

- choice of travel mode,

- purpose of the trip,

- time of day when the trip was made,

- average trip length (km) and travel time (minutes), and the

- alternate mode choice if the current travel mode were not available.

## 3.1 Definitions

The following terms are used to describe the characteristics of the number and type of trips which are generated in the Edmonton CMA.

1. *Household* - the oldest definition of a household requires the sharing of a "hearth", or in the modern day, a kitchen  All members of a household who share the kitchen facilities, including extended families, are considered one household. Individuals who rent space in a house and have separate kitchen facilities are considered to be separate households.

2. *Person* - a person includes all members of each household, from infants who are one day old, up to their grandparents.

3. *Trip* - a trip is travel by an individual, whether by motorized vehicle, bicycle, or on foot, which is at least 100 metres ( or two blocks) in length and which is made using a specific mode for a specific purpose.

4. *Mode* - each trip is made using a specific travel mode. Trip information is presented for seven travel modes; auto drivers, auto passengers, public transit, school or private bus, walk, bicycle, and other.

5. *Trip purpose* - each trip is made for a specific purpose. Eight trip purposes are used to describe all trips; home-based work, home-based post-secondary, home-based school, home-based shopping, home-based social recreation, home-based other, non home-based work, and non home-based other.

6. *Home-based  trip* - the person's household is either the origin or the destination of the trip.

7. *Non home-based trip* - neither the origin nor the destination of the trip is at the household.

8. ***Home-based work trip*** - a trip made either to or from a person's place of employment.

9. ***Home-based post-secondary trip*** - a trip made by a student to go to or from a post-secondary institution, such as the University, NAIT or Grant MacEwan.

10. ***Home-based school trip*** - a trip made by a student to go to/from an elementary, junior high or senior high school

11. ***Home-based shopping trip*** - a trip made to shop or purchase an item, including going to a restaurant or buying gas.

12. ***Home-based social/recreation trip*** - travel made for social or recreation purposes during which no business is conducted (i.e. parties, golfing, movies, visits to friends, church activities, lectures)

13. ***Home-based other trip*** - travel made to or from the home which does not meet one of the previous trip definitions.

14. ***Non home-based work trip*** - travel made to the work place which does not start or end at home. Examples include returning to work after lunch.

15. ***Non home-based other trip*** - all other non-home based trips.

16. ***Travel time*** - the time in minutes between the start of the trip and the end of the trip

17. ***Time of day of trip*** - the time during the day that the trip is made; based on the average of the start time and the end time of the trip

18. ***Trip length*** - the distance in kilometres traveled from the trip origin to the trip destination. As trip distance was not collected as part of the travel survey, the trip distance was calculated based on the locations of the trip origin and destination.

19. ***Alternate mode choice*** - for each trip, the survey respondents were asked to imagine that the mode selected for the trip was not available. They were then asked to select an alternate mode which they would use in order to make the trip.

## *3.2  Daily Trip Generation Rates*

Daily trip generation rates are presented for households and for persons.

### 3.2.1  Daily Household Trip Generation Rates

Household size, income levels, and the availability of autos are all important determining factors in the number of trips generated by a household.  The following tables illustrate the daily person trip generation rates by each of these three parameters.

*Table 3.1 - Daily Person Trips per Household by Household Income and Size (City of Edmonton)*

| *City of Edmonton* | **Household Income** | | | | |
|---|---|---|---|---|---|
| **Household size (persons)** | < $15,000 | $15 - $24,999 | $25 - $59,999 | $60,000+ | TOTAL |
| 1 | 3.27 | 3.73 | 4.32 | 4.01 | 3.77 |
| 2 | 6.57 | 6.01 | 7.13 | 8.14 | 7.12 |
| 3 | 9.66 | 9.78 | 10.36 | 11.70 | 10.69 |
| 4 | 12.48 | 13.21 | 14.66 | 15.61 | 14.83 |
| 5+ | n/a | 15.70 | 19.14 | 20.00 | 19.30 |
| TOTAL | 5.58 | 6.59 | 9.51 | 12.63 | 9.17 |

*Figure 3.1 - Daily Person Trips per Household by Household Size (City of Edmonton)*



*Figure 3.2 - Daily Person Trips per Household by Household Income (City of Edmonton)*
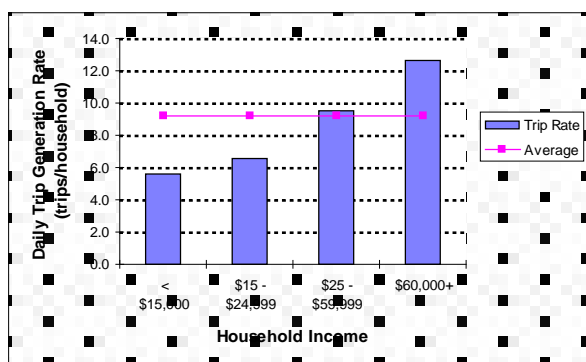


An average of 9.2 daily person trips are generated by each household in the City of Edmonton.  As can be expected, more trips are generated by households where more people live.

As well, the number of trips generated by a household is observed to increase with household income.

In Tables 3.1 through 3.4, 'n/a' indicates that insufficient data was available for the specific criteria to present a statistically valid trip generation rate.

*Table 3.2 -  Daily Person Trips per Household by Household Income and Size (Edmonton Region)*

| Edmonton Region | Household Income | | | | |
|---|---|---|---|---|---|
| Household size (persons) | < $15,000 | $15 - $24,999 | $25 - $59,999 | $60,000+ | TOTAL |
| 1 | 2.75 | 2.81 | 3.92 | 2.85 | 3.23 |
| 2 | 6.38 | 6.08 | 6.72 | 7.42 | 6.84 |
| 3 | 6.31 | 9.85 | 9.61 | 10.83 | 10.03 |
| 4 | n/a | n/a | 14.38 | 14.93 | 14.92 |
| 5+ | n/a | n/a | 18.45 | 19.41 | 18.75 |
| TOTAL | 5.91 | 8.15 | 10.73 | 13.11 | 11.09 |

In the Edmonton Region, for each income and size group, the daily household person trip rate compares favourably with those observed in the City of Edmonton. However, the overall average household person trip generation rate is higher in the Edmonton region than in the City of Edmonton. In the City, the average rate

*Figure 3.3 - Daily Person Trips per Household by Household Size (Edmonton Region)*
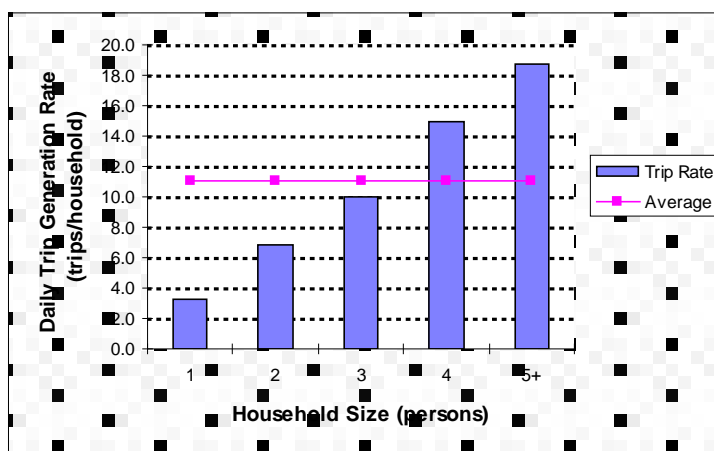


was 9.2 daily person trips per household while the rate in the Edmonton region is approximately 11.1 trips per household.  This difference is primarily due to the fact that both the average household size and household income in the Edmonton region is higher than that in the City of Edmonton.

*Figure 3.4 - Daily Person Trips per Household by Household Income (Edmonton Region)*
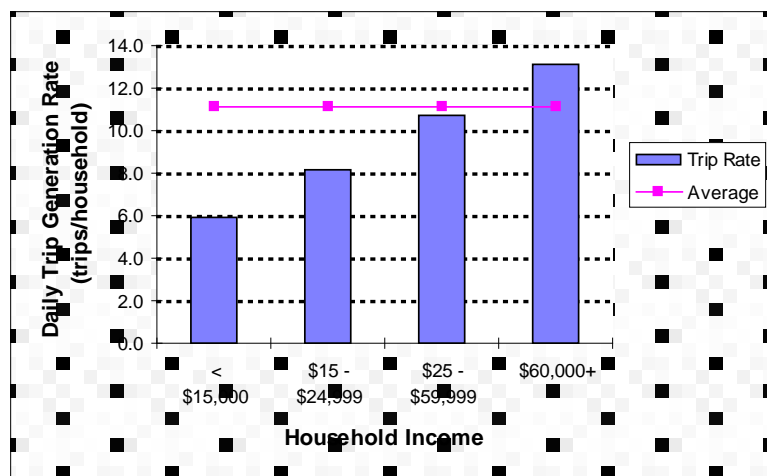
*Figure 3.5 - Daily Person Trips per Household by Household Size and Income (City of Edmonton)*
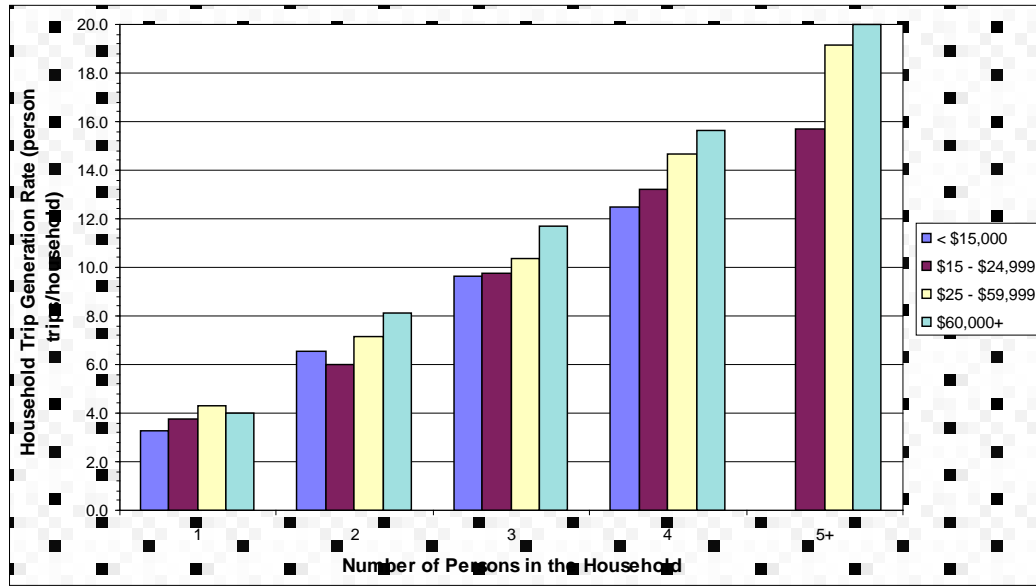


*Figure 3.6 - Daily Person Trips per Household by Household Size and Income (Edmonton Region)*
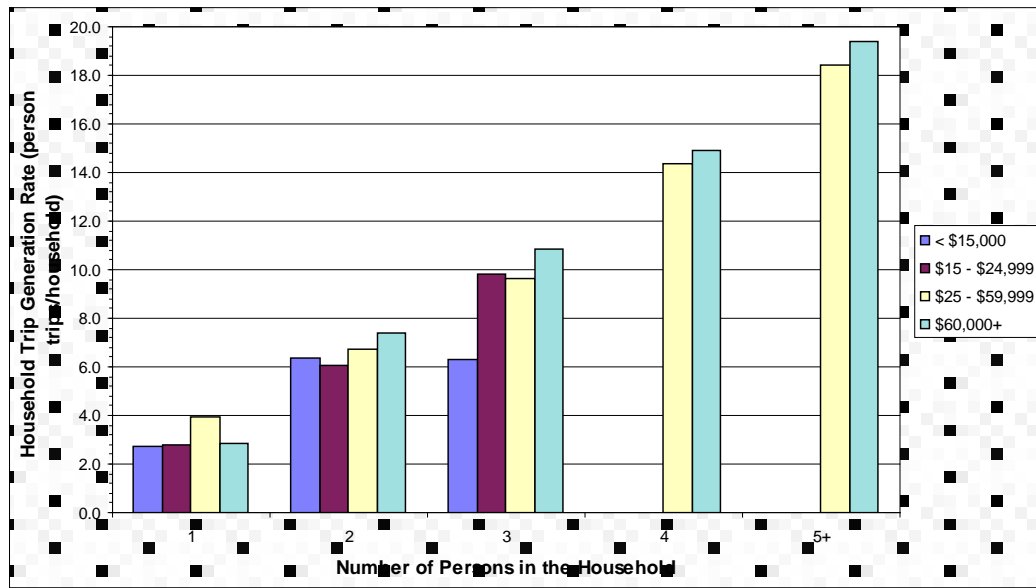
*Table 3.3 - Daily Person Trips per Household by Household Size and Number of Vehicles (Edmonton)*

| *City of Edmonton* | **Household Size (persons)** | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Number of vehicles** | 1 | 2 | 3 | 4 | 5+ | TOTAL |
| None | 2.82 | 6.17 | 9.73 | n/a | n/a | 4.19 |
| 1 | 4.03 | 6.55 | 9.46 | 13.47 | 17.39 | 6.81 |
| 2 | 4.61 | 7.59 | 11.24 | 15.13 | 20.17 | 11.69 |
| 3 | 4.93 | 7.86 | 11.12 | 15.03 | 19.95 | 12.71 |
| 4 | n/a | n/a | 12.42 | 17.38 | 17.08 | 14.11 |
| 5 + | n/a | n/a | n/a | n/a | n/a | 12.01 |
| TOTAL | 3.77 | 7.12 | 10.69 | 14.83 | 19.30 | 9.17 |

The daily person trip generation rate is observed to increases as the number of vehicles available for use by the household increases. For households with no vehicles, the trip rate averages 4.2 daily person trips per household while for households with three or more vehicles, the trip rate ranges from 12.0 to 14.1 person trips per household.

*Figure 3.7 - Daily Person Trips per Household by Number of Vehicles (City of Edmonton)*
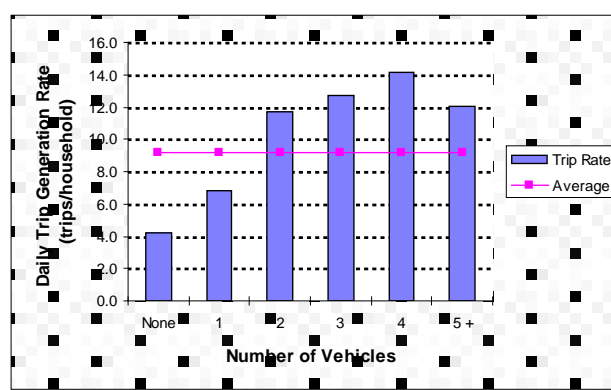


*Figure 3.8 - Daily Person Trips per Household by Number of Vehicles (Edmonton Region)*
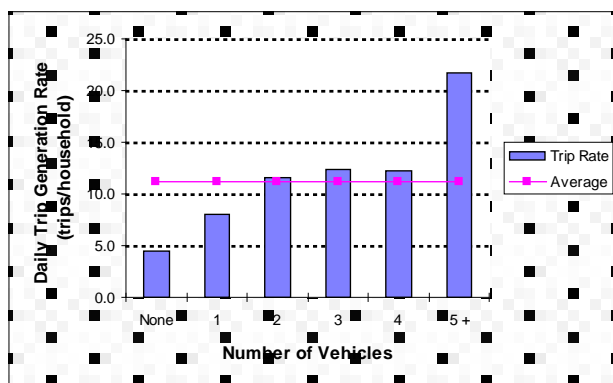


As was observed in the City of Edmonton, the household person trip rate increases with the number of vehicles available for use by the household.

*Table 3.4 - Daily Person Trips per Household by Household  Size and Number of Vehicles (Region)*

| *Edmonton Region* | **Household Size (persons)** | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Number of vehicles** | 1 | 2 | 3 | 4 | 5+ | TOTAL |
| None | 1.93 | n/a | n/a | n/a | n/a | 4.46 |
| 1 | 3.30 | 7.29 | 9.17 | 17.07 | 16.26 | 8.05 |
| 2 | 3.40 | 6.98 | 9.92 | 14.15 | 19.56 | 11.58 |
| 3 | 4.60 | 6.01 | 10.67 | 16.05 | 17.24 | 12.36 |
| 4 | n/a | 5.40 | 10.02 | 15.08 | 17.09 | 12.25 |
| 5 + | n/a | n/a | n/a | n/a | n/a | 21.69 |
| TOTAL | 3.23 | 6.88 | 10.20 | 14.94 | 19.31 | 11.19 |

*Figure 3.9 - Daily Person Trips per Household by Household Size and Number of Vehicles (City of Edmonton)*
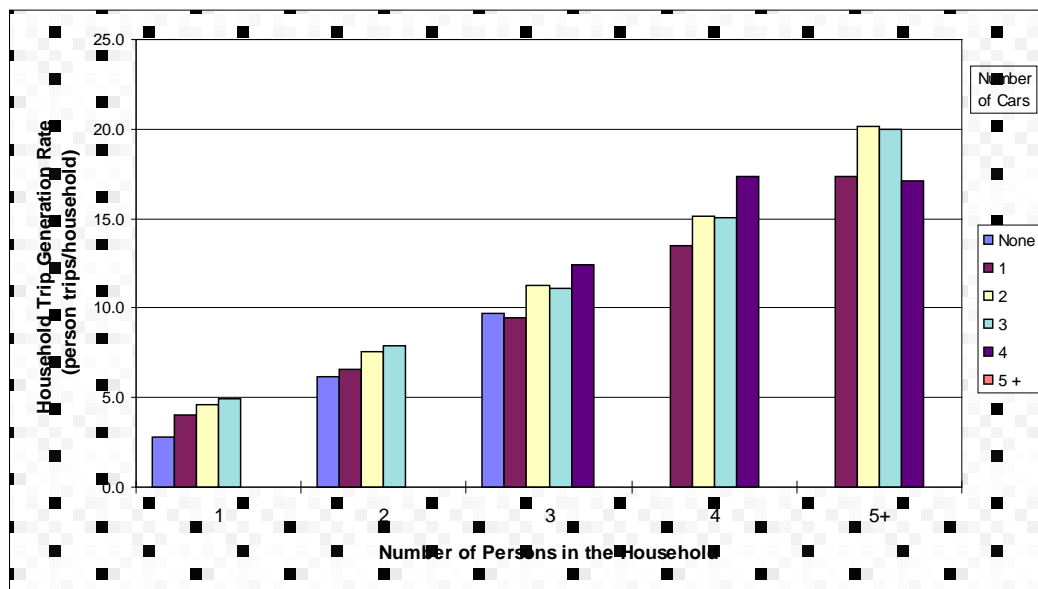


*Figure 3.10 - Daily Person Trips per Household by Household Size and Number of Vehicles (Edmonton Region)*
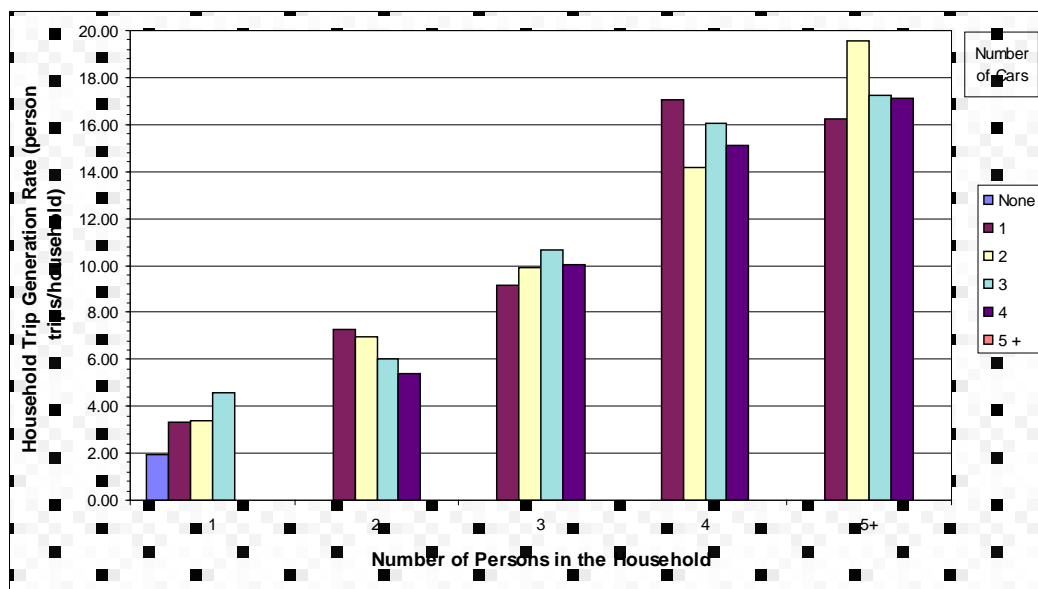
### 3.2.2 Daily Trip Generation Rates per Person

*Table 3.5 - Daily Trips per Person by Travel Mode, Age Group and Gender (City of Edmonton)*

| *City of Edmonton* | Age Group | | | Gender | | All |
|---|---|---|---|---|---|---|
| **Travel Mode** | **< 16** | **16 - 64** | **65 +** | **Male** | **Female** | **Persons** |
| Auto Driver | 0.00 | 2.65 | 1.80 | 2.29 | 1.66 | 1.96 |
| Auto Passenger | 1.96 | 0.51 | 0.51 | 0.68 | 0.99 | 0.85 |
| Transit | 0.25 | 0.33 | 0.31 | 0.25 | 0.37 | 0.31 |
| School/Private Bus | 0.15 | 0.01 | 0.00 | 0.04 | 0.04 | 0.04 |
| Walk | 0.78 | 0.30 | 0.30 | 0.41 | 0.41 | 0.41 |
| Bicycle | 0.02 | 0.02 | 0.01 | 0.03 | 0.00 | 0.02 |
| Other | 0.01 | 0.02 | 0.05 | 0.02 | 0.03 | 0.02 |
| All Modes | 3.18 | 3.84 | 2.97 | 3.72 | 3.50 | 3.61 |

*Table 3.6 - Daily Trips per Person by Travel Mode,Age Group, and Gender (Edmonton Region)*

| **Edmonton Region** | Age Group | | | Gender | | All |
|---|---|---|---|---|---|---|
| **Travel Mode** | **< 16** | **16 - 64** | **65 +** | **Male** | **Female** | **Persons** |
| Auto Driver | 0.00 | 2.99 | 2.24 | 2.30 | 1.84 | 2.07 |
| Auto Passenger | 1.86 | 0.54 | 0.61 | 0.71 | 1.15 | 0.93 |
| Transit | 0.03 | 0.05 | 0.00 | 0.03 | 0.05 | 0.04 |
| School/Private Bus | 0.59 | 0.05 | 0.01 | 0.21 | 0.20 | 0.21 |
| Walk | 0.49 | 0.13 | 0.09 | 0.24 | 0.22 | 0.23 |
| Bicycle | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Other | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| All Modes | 2.98 | 3.76 | 2.96 | 3.51 | 3.47 | 3.49 |

*Figure 3.11 - Daily Trips per Person by Travel Mode*
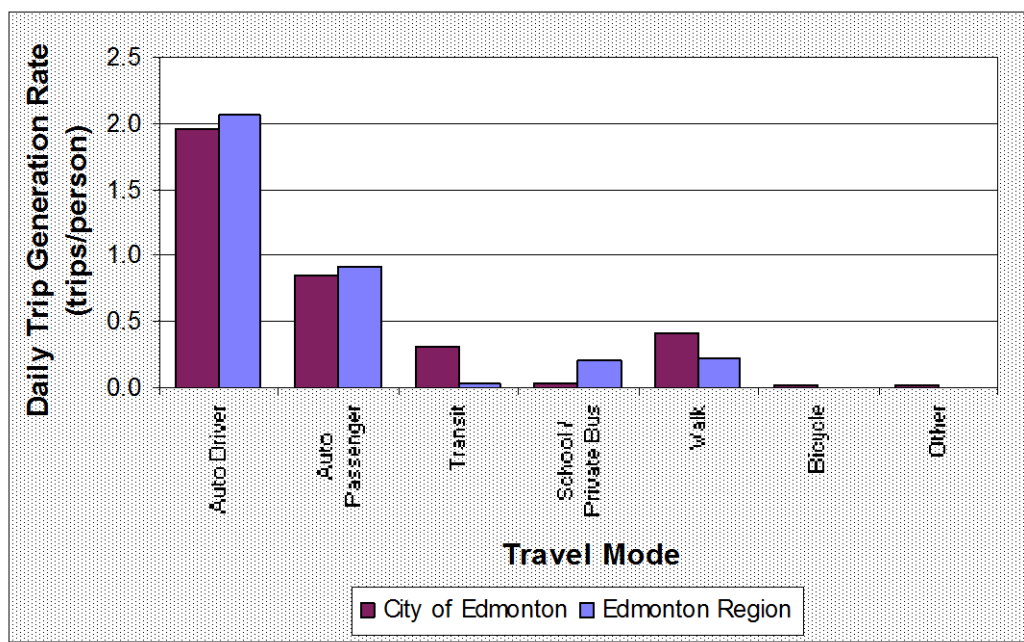
*Figure 3.12 - Daily Trips per Person by Travel Mode and Age Group (City of Edmonton)*
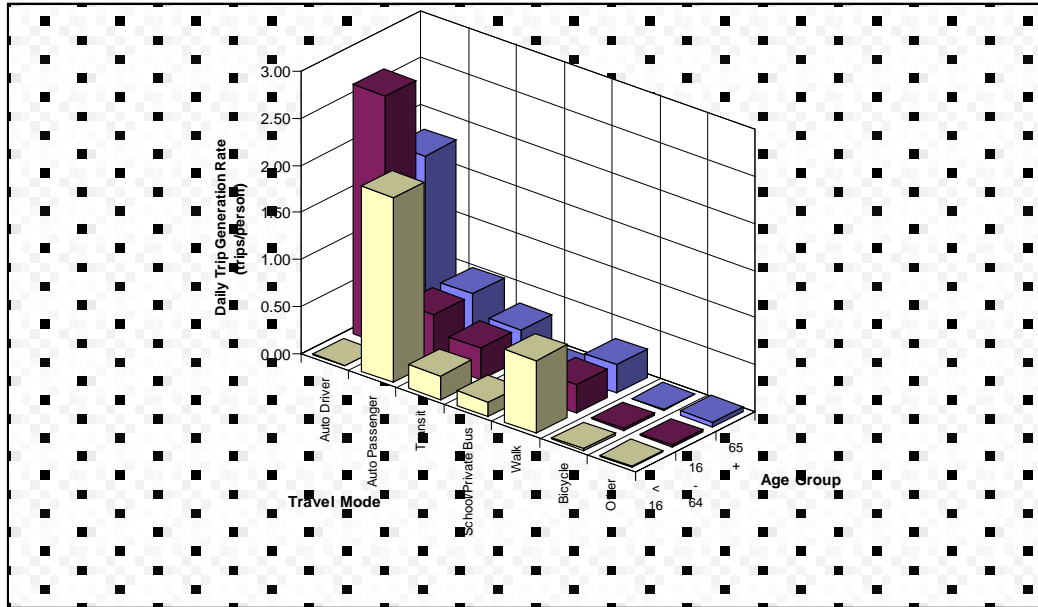


*Figure 3.13 - Daily Trips Per Person by Travel Mode and Gender (City of Edmonton)*
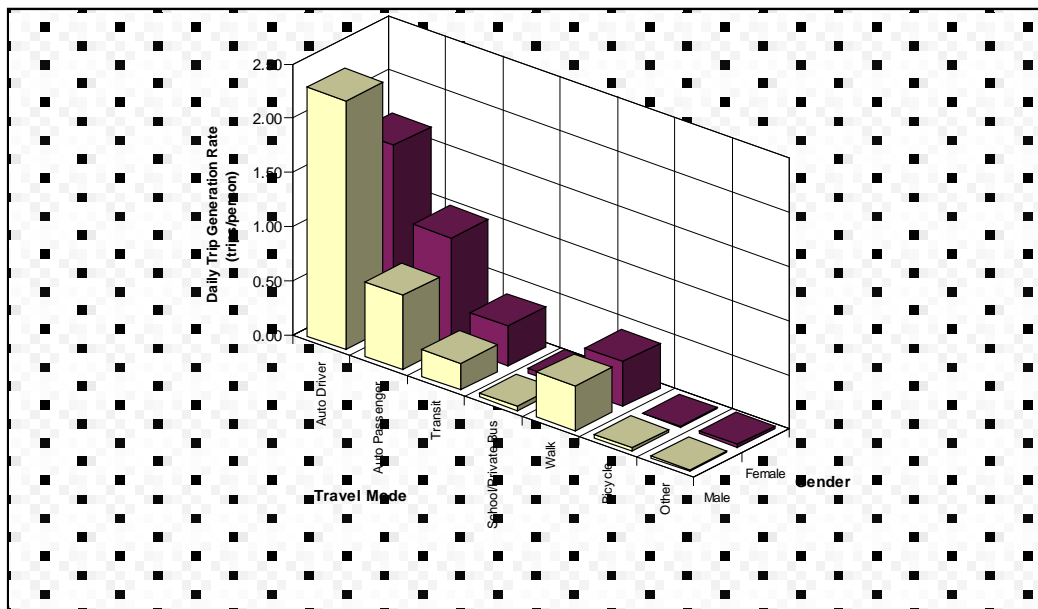
## 3.3  Person Trips

On an average weekday, over 3,000,000 person trips are made by residents living in the study area, of which 73% are made by residents of the City of Edmonton.  The travel modes of these person trips are summarized below.

*Table 3.7 - Travel Mode (Daily Person Trips)*

| Travel Mode | City of Edmonton | | Edmonton Region | |
|---|---|---|---|---|
| | Daily Person Trips | % | Daily Person Trips | % |
| Auto Driver | 1,221,704 | 54.3% | 482,964 | 59.3% |
| Auto Passenger | 527,199 | 23.4% | 216,670 | 26.6% |
| Transit | 194,308 | 8.6% | 9,526 | 1.2% |
| School/Private Bus | 25,062 | 1.1% | 48,374 | 5.9% |
| Walk | 257,789 | 11.5% | 54,264 | 6.7% |
| Bicycle | 10,121 | 0.4% | 675 | 0.1% |
| Other | 13,563 | 0.6% | 2,011 | 0.2% |
| *TOTAL* | 2,249,745 | 100.0% | 814,484 | 100.0% |

Over half of all person trips are made  by driving a car, with residents in the Edmonton region relying more on the automobile than City of Edmonton residents.  One quarter of all trips are made as an auto passenger.

Approximately one out of every twelve trips (8.6%) in the City of Edmonton are made by transit (bus and LRT) while in the Edmonton region, only about 1% of all trips are made by public transit. All of the transit trips in the Edmonton region are made either within or to/from Sherwood Park or St. Albert.

*Figure 3.14 - % of Daily Person Trips by Travel Mode (City of Edmonton)*
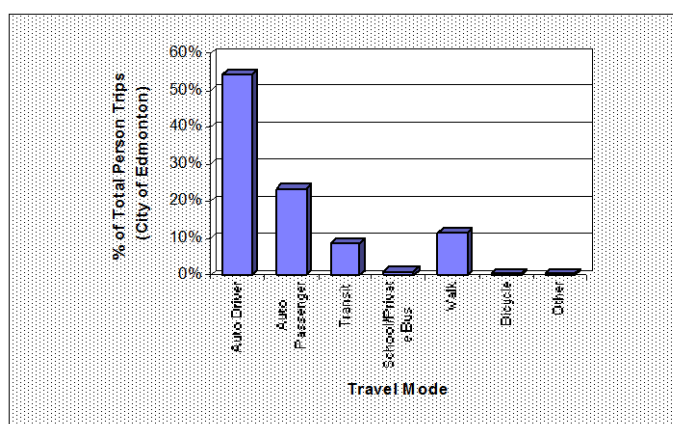


Walking trips account for about 12% of all City of Edmonton trips but only 7% of all trips made in the Edmonton region.  Trips by bicycle during the survey period (November and December) are limited.

The remainder of Section 3.3 describes characteristics of trips made by all persons. Sections 3.4 to 3.7 look at trips made by auto driver, auto passenger, transit and walk modes respectively.

*(Note:  Bicycle trips are not presented in detail, because of the low number of trips made by that mode in the survey period.  The City of Edmonton Transportation Department*

*conducted a separate Bicycle User Survey in September 1994. Data on bicycle usage in that time period is being tabulated as part of that survey.)*

### 3.3.1  Trip Purpose

The distribution of daily person trips by trip purpose is shown below.

*Table 3.8 - Trip Purposes (Daily Person Trips)*

| Trip Purpose | *City of Edmonton* | | *Edmonton Region* | |
|---|---|---|---|---|
| | **Daily Person Trips** | **%** | **Daily Person Trips** | **%** |
| Home-based Work | 379,140 | 16.9% | 127,651 | 15.7% |
| Home-based Post Secondary | 70,900 | 3.2% | 8,784 | 1.1% |
| Home-based School | 241,030 | 10.7% | 107,523 | 13.2% |
| Home-based Shopping | 237,853 | 10.6% | 71,451 | 8.8% |
| Home-based Social/Recreation | 209,409 | 9.3% | 84,212 | 10.3% |
| Home-based Other | 548,751 | 24.4% | 192,808 | 23.7% |
| *Home-based Sub-total* | *1,687,083* | *75.0%* | *592,429* | *72.7%* |
| Non home-based Work | 76,831 | 3.4% | 26,779 | 3.3% |
| Non home-based Other | 485,831 | 21.6% | 195,274 | 24.0% |
| *Non home-based Sub-total* | *562,662* | *25.0%* | *222,053* | *27.3%* |
| *TOTAL* | *2,249,745* | *100.0%* | *814,484* | *100.0%* |

In the City of Edmonton, three out of every four person trips are home-based, which means that the person's home is either the origin or the destination of the trip. Travel to and from the workplace make up approximately 20% of all daily person trips. About 80% of these work trips are made by vehicle, either as a driver or as a passenger.

Post-secondary trips are made equally by

*Figure 3.15 - Trip Purpose by Travel Mode for Daily Person Trips in the City of Edmonton*



automobile (40%) and transit (40%) while the majority of trips to school are either made by walking or as an auto passenger.

Trips for such purposes as to eat a meal, personal business, just along for the ride or to pick-up or drop-off passengers account for about 40% of all person trips. Nearly half of these kind of trips are non-home based.

Since 'other' trips make up such a significant percentage of all person trips made during an average weekday, a more detailed examination of these types of trips was undertaken. Using the original travel survey classifications for trip purpose, the specific purposes of trips in the City of Edmonton which are generalized as 'other' are summarized as follows:

*Table 3.9 - Other Trip Purposes - City of Edmonton (Daily Person Trips)*

| Trip Purpose | Home-based | % | Non-home based | % |
|---|---|---|---|---|
| Work related | 49,659 | 9.0% | 67,082 | 13.8% |
| Pre-school/daycare | n/a | n/a | 8,682 | 1.8% |
| Grade school | n/a | n/a | 14,590 | 3.0% |
| Post-secondary | n/a | n/a | 6,863 | 1.4% |
| Social-recreation | n/a | n/a | 53,823 | 11.1% |
| Shopping | n/a | n/a | 117,424 | 24.2% |
| Eat a meal | 51,328 | 9.4% | 53,089 | 10.9% |
| Personal business | 179,323 | 32.7% | 78,625 | 16.2% |
| PU/DO passengers | 131,905 | 24.0% | 22,041 | 4.5% |
| Change mode | 5,720 | 1.0% | 7,002 | 1.4% |
| Along for ride | 79,373 | 14.5% | 38,642 | 8.0% |
| Other | 51,443 | 9.4% | 17,970 | 3.7% |
| TOTAL | 548,751 | 100.0% | 485,831 | 100.0% |

The majority of home-based 'other' trips are made for personal business. Personal business trips are defined as trips made to obtain services as opposed to purchasing goods. Trips to a bank, to the post office, to a doctor or dentist, and to a barber are considered personal trips. Trips made to have an item repaired, such as a car or radio, or to have clothes cleaned, are also considered to be personal trips. In this table, 'n/a' indicates that the value is not applicable since these home-based trip purposes are already described as part of the eight standard trip purposes.

*Figure 3.16 - Other Person Trip Purposes (City of Edmonton)*



Trips which are made to either pick-up or drop-off a passenger make up over 20% of these other trips. These trips include bringing a child to school or day-care, or dropping some-one off at an LRT station.

Of the non home-based 'other' trips, shopping was the pre-dominant trip purpose (24%) while work-related trips ranked second at 14% .
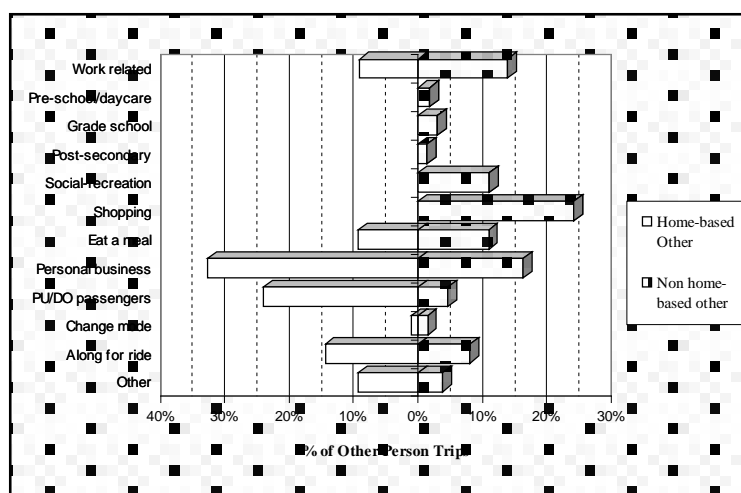
### 3.3.2  Trips by Time of Day

The distribution of daily person trips by trip purpose for each hour in a typical weekday is illustrated below.

*Figure 3.17 - Distribution of Person Trips by Trip Purpose and Time of Day (City of Edmonton)*
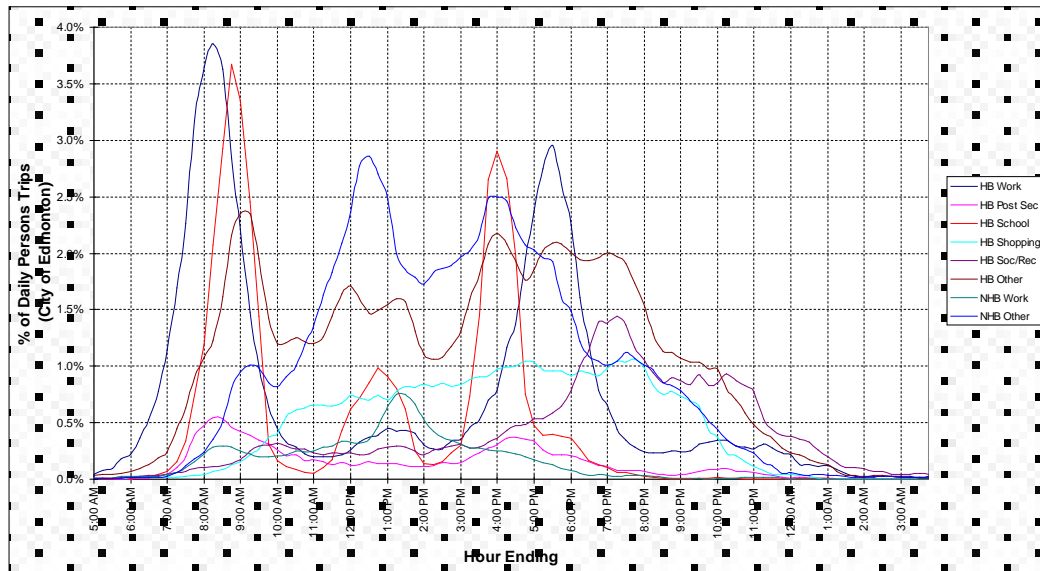


Each trip purpose has specific characteristics in terms of the time of day when the trip takes place.  The morning peak hour is evident for home-based work (7:15AM to 8:15AM) and home-based school (7:45AM to 8:45AM) trips.  Another period of peak activity is during the lunch hour when many school trips and non-home based other trips (such as going to lunch at a restaurant) take place.  An afternoon peak period is observed between 3:00PM and 4:00PM for school and 'other' trips while the PM peak hour for work trips occurs between 4:30PM and 5:30PM.

*Figure 3.18 - Distribution of Person Trips by Trip Purpose and Time of Day (Edmonton Region)*
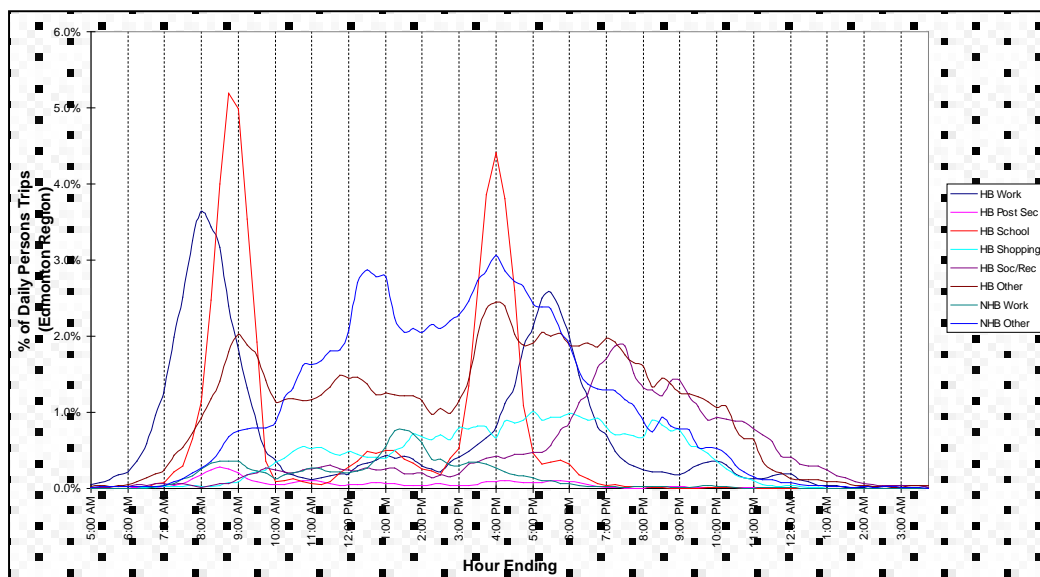
The distribution by time of day for trips made by households in the Edmonton region are similar to those in the City, although a more pronounced morning and afternoon peak is evident for school trips.

The distribution of all person trips by time of day is presented in the following figures.

*Figure 3.19 - Distribution of Person Trips by Time of Day*
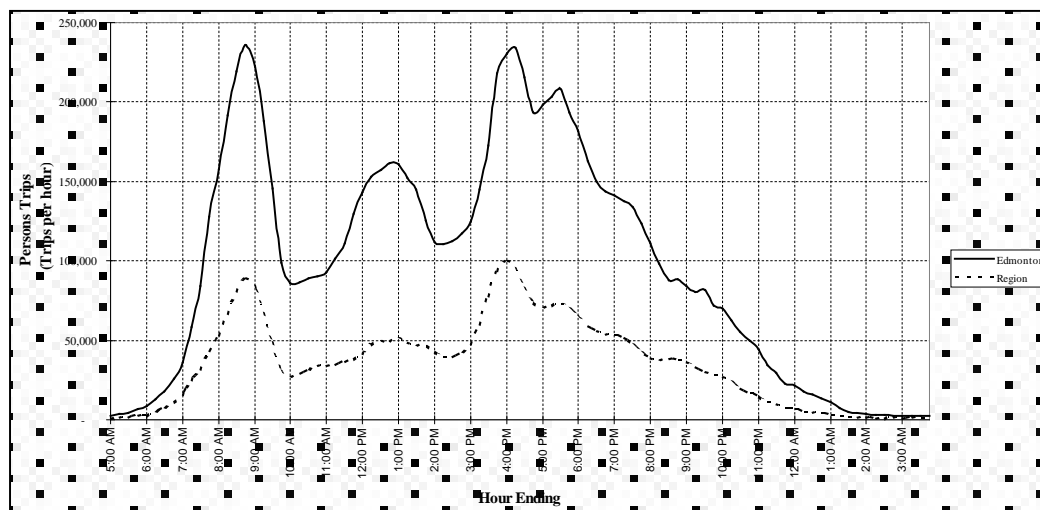


*Figure 3.20 - Distribution of Person Trips by Time of Day (% of Daily Trips)*
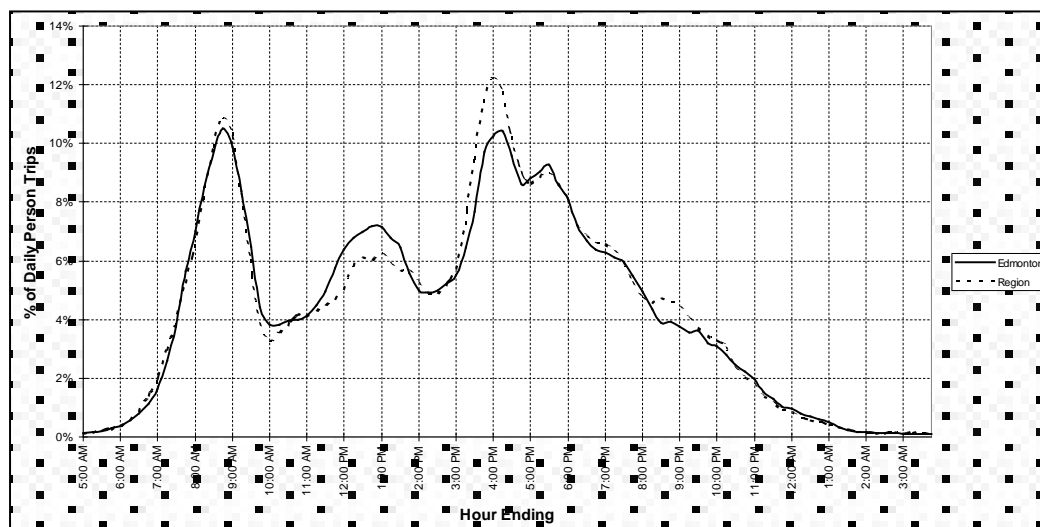


Total person trips by time of day exhibit similar characteristics for both trips made by residents of the City of Edmonton and by residents of the Edmonton Region. A well-defined peak hour is observed between 7:45AM and 8:45AM and again between 3:00PM and 4:00PM. The PM peak is somewhat more accentuated for the Region traffic. A noon-hour peak is more evident in the City than in the Region while more trips take place during the PM peak in the Region than in the City.

*Figure 3.21 - Distribution of Person Trips by Travel Mode and Time of Day (City of Edmonton)*
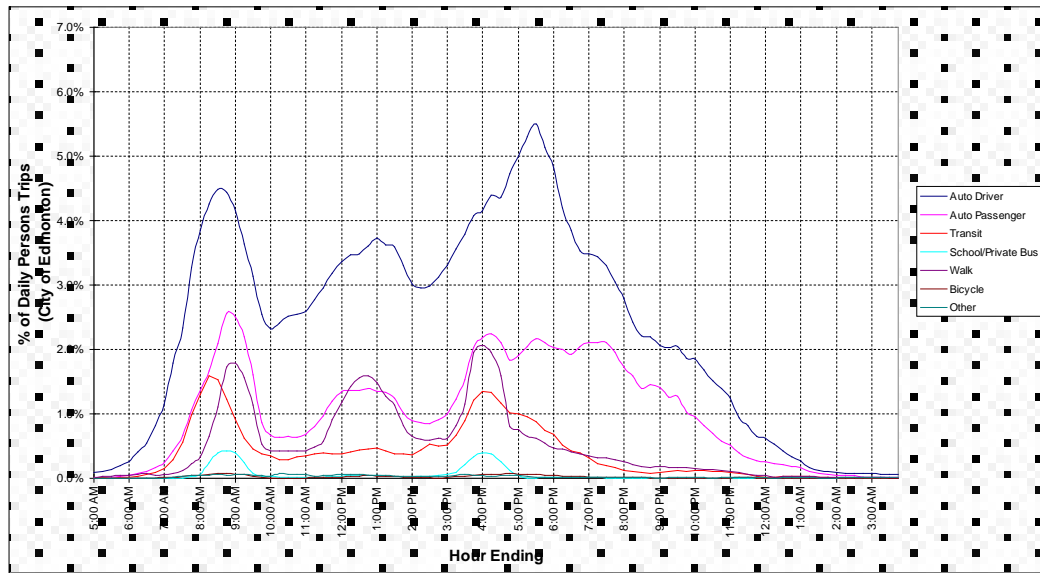


Trips made using each travel mode have similar characteristics. A distinct AM peak period is observed which generally occurs between 7:30AM and 8:30AM. The noon hour is another period of increased activity followed by the afternoon peak period which begins at 3:00PM for some modes. Of interest is the fact that auto passenger travel remains relatively constant between 3:00PM and 8:00PM while auto driver travel increases to a sharp peak and then declines again during this period. This pattern is due, in part, to the relatively low auto-occupancy for PM peak hour work trips and higher auto occupancies for other trip purposes during the same period.

*Figure 3.22 - Distribution of Person Trips by Travel Mode and Time of Day (Edmonton Region)*
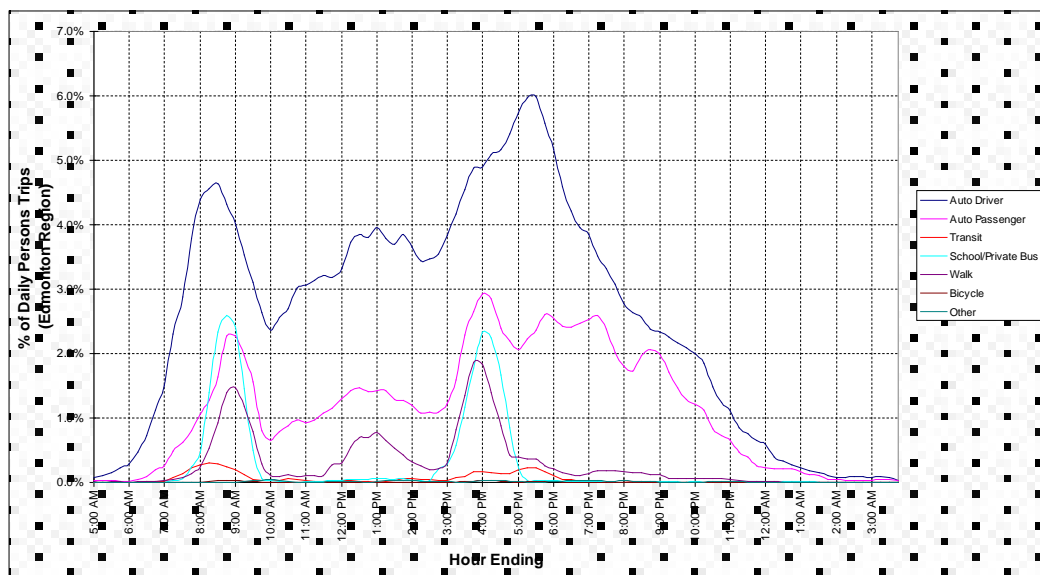
### 3.3.3  Trip Length and Travel Time

The average trip length (kilometres) and travel time (minutes) for all trips made by residents of the City of Edmonton are presented below.

*Table 3.10 - Average Person Trip Length and Travel Time by Trip Purpose - City of Edmonton*

| *City of Edmonton* | Person Trips | % | Person-km | % | Average trip length (km) | Average trip time (min) |
|---|---|---|---|---|---|---|
| HB Work | 379,140 | 16.9% | 3,907,325 | 26.0% | 10.3 | 25.8 |
| HB Post Sec | 70,900 | 3.2% | 531,435 | 3.5% | 7.5 | 28.6 |
| HB School | 241,030 | 10.7% | 794,517 | 5.3% | 3.3 | 18.6 |
| HB Shopping | 237,853 | 10.6% | 1,081,706 | 7.2% | 4.5 | 16.9 |
| HB Soc/Rec | 209,409 | 9.3% | 1,588,584 | 10.6% | 7.6 | 19.4 |
| HB Other | 548,751 | 24.4% | 3,584,916 | 23.8% | 6.5 | 18.3 |
| NHB Work | 76,831 | 3.4% | 587,640 | 3.9% | 7.6 | 18.9 |
| NHB Other | 485,831 | 21.6% | 2,975,856 | 19.8% | 6.1 | 17.2 |
| TOTAL | 2,249,745 | 100.0% | 15,051,978 | 100.0% | 6.7 | 19.7 |

The total distance traveled by residents of the City of Edmonton on an average weekday is approximately 15,000,000 kilometres. One out of every four kilometres traveled is made by a person traveling between home and the workplace.

The average trip length for all person trips made by all residents of the City of Edmonton is estimated to be 6.7 km per trip.  The work trip has the longest average trip length at 10.3 km while school trips are the shortest with an average of 3.3 km.

An average travel time of about 20 minutes is observed for all person trips made by City of Edmonton residents.  Shopping trips have on average the shortest travel time, with each trip taking about 17 minutes, while post-secondary trips have the longest average travel time of 29 minutes.

*Figure 3.23 - Average Person Trip Length and Travel Time by Trip Purpose - City of Edmonton*
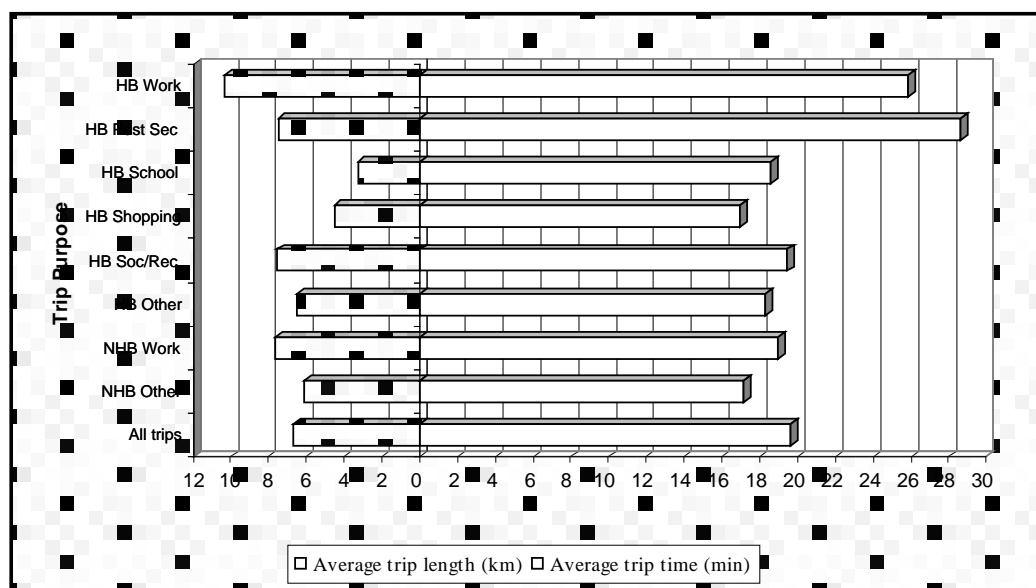
## 3.4  Auto Driver Trips

### 3.4.1  Trip Purpose

Over 1.2 million auto driver trips are made on an average weekday by City of Edmonton residents while Edmonton region residents make approximately 480,000 auto driver trips per weekday.

*Table 3.11 - Trip Purposes (Daily Auto Driver Trips)*

| Trip Purpose | *City of Edmonton* | | *Edmonton Region* | |
|---|---|---|---|---|
| | **Daily Auto Driver Trips** | **%** | **Daily Auto Driver Trips** | **%** |
| Home-based Work | 283,268 | 23.2% | 112,332 | 23.3% |
| Home-based Post Secondary | 23,694 | 1.9% | 6,107 | 1.3% |
| Home-based School | 5,416 | 0.4% | 4,023 | 0.8% |
| Home-based Shopping | 145,970 | 11.9% | 52,917 | 11.0% |
| Home-based Social/Recreation | 105,572 | 8.6% | 41,141 | 8.5% |
| Home-based Other | 330,105 | 27.0% | 122,273 | 25.3% |
| *Home-based Sub-total* | *894,024* | *73.2%* | *338,793* | *70.1%* |
| Non home-based Work | 52,237 | 4.3% | 21,834 | 4.5% |
| Non home-based Other | 275,443 | 22.5% | 122,337 | 25.3% |
| *Non home-based Sub-total* | *327,680* | *26.8%* | *144,171* | *29.9%* |
| ***TOTAL*** | ***1,221,704*** | ***100.0%*** | ***482,964*** | ***100.0%*** |

Auto driver trips have similar characteristics to the pattern observed for all person trips; about 75% of these trips are home-based and about 28% are trips made to and from work.

Post-secondary trips account for only about 2% of all auto-driver trips while school trips are negligible.

The pre-dominant trip purpose again is the 'other' trips, which make-up nearly half of all auto driver trips on an average weekday. An analysis of the specific purposes of these trips which are classified as 'other' is presented on the following page.

*Figure 3.24 - Trip Purpose for Daily Auto Driver Trips in the City of Edmonton*
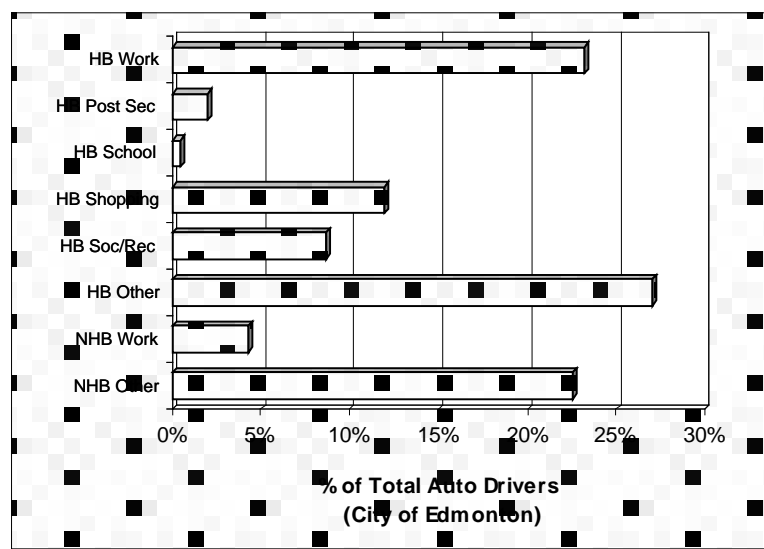
*Table 3.12 - Other Trip Purposes  - City of Edmonton (Daily Auto Driver Trips)*

| Trip Purpose | Home-based Other | % | Non-home based Other | % |
|---|---|---|---|---|
| Work related | 41,856 | 12.7% | 56,505 | 20.5% |
| Pre-school/daycare | n/a | n/a | 0 | 0.0% |
| Grade school | n/a | n/a | 270 | 0.1% |
| Post-secondary | n/a | n/a | 2,961 | 1.1% |
| Social-recreation | n/a | n/a | 26,030 | 9.5% |
| Shopping | n/a | n/a | 78,392 | 28.5% |
| Eat a meal | 27,705 | 8.4% | 26,295 | 9.5% |
| Personal business | 118,267 | 35.8% | 55,401 | 20.1% |
| PU/DO passengers | 111,398 | 33.7% | 19,016 | 6.9% |
| Change mode | 2,642 | 0.8% | 485 | 0.2% |
| Along for ride | 687 | 0.2% | 384 | 0.1% |
| Other | 27,550 | 8.3% | 9,704 | 3.5% |
| TOTAL | 330,105 | 100.0% | 275,443 | 100.0% |

The majority of home-based 'other' auto driver trips are made for either personal business (36%) or to pickup-up or drop-off a passenger (34%).  One in every eight home-based other auto driver trips (13%) in the City of Edmonton were work related.

Of the non home-based 'other' trips, shopping accounted for about 29% of these trips while personal business and work-related trips each accounted for 20%.

*Figure 3.25 - Other Auto Driver Trip Purposes (City of Edmonton)*
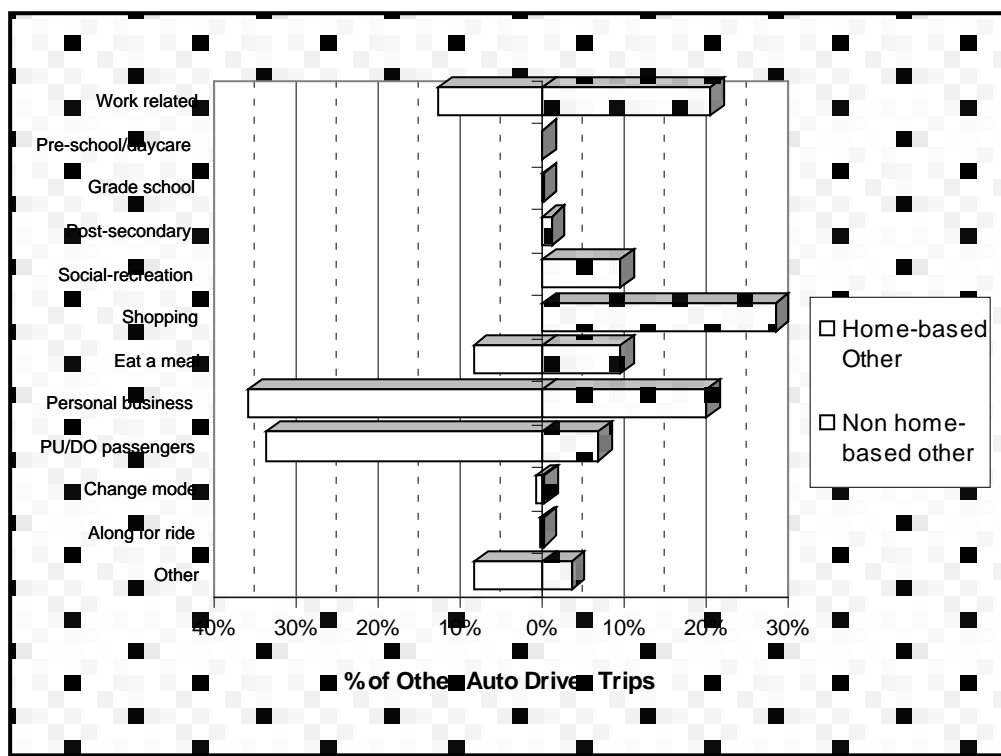
### 3.4.2 Trips by Time of Day

The distribution of daily auto driver trips by trip purpose for each hour in a typical weekday is illustrated below.

*Figure 3.26 - Distribution of Auto Driver Trips by Trip Purpose and Time of Day (City of Edmonton)*
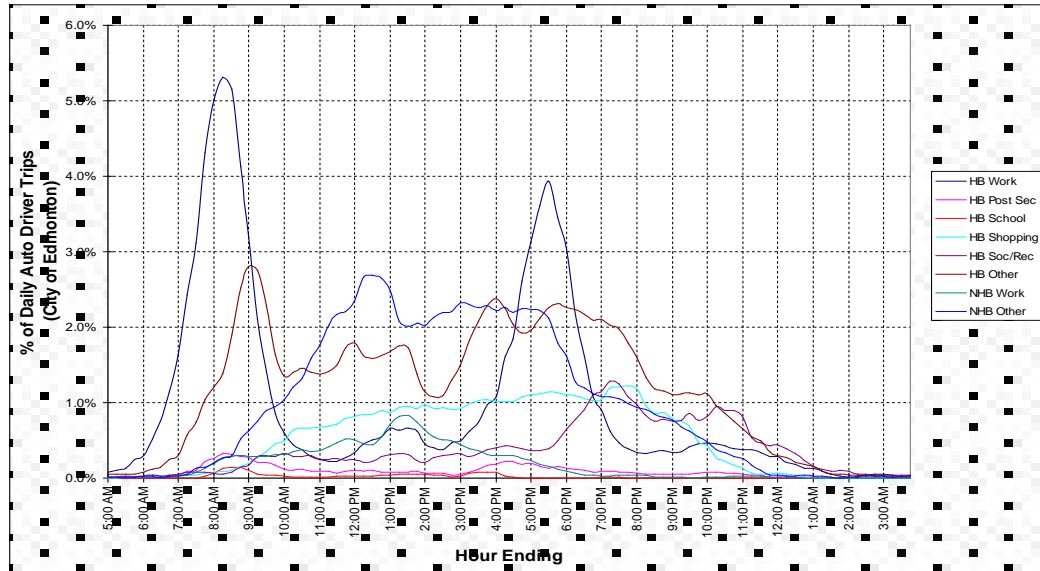


In both the City and the Region, the home-based work trip is the pre-dominant trip purpose during the AM and PM peak hour. More than 5% of all daily auto driver trips are made to/from the workplace during the AM work trip peak hour, which occurs between 7:15AM and 8:15AM. Home-based other trips peak between 8:00AM and 9:00AM and again during the late afternoon where a high proportion of these trips are observed between 3:00PM and 7:00PM. Non-home based other trips pre-dominate during rest of the day, with peak activity for this purpose observed between 11:30AM and 12:30PM.

*Figure 3.27 - Distribution of Auto Driver Trips by Trip Purpose and Time of Day (Edmonton Region)*
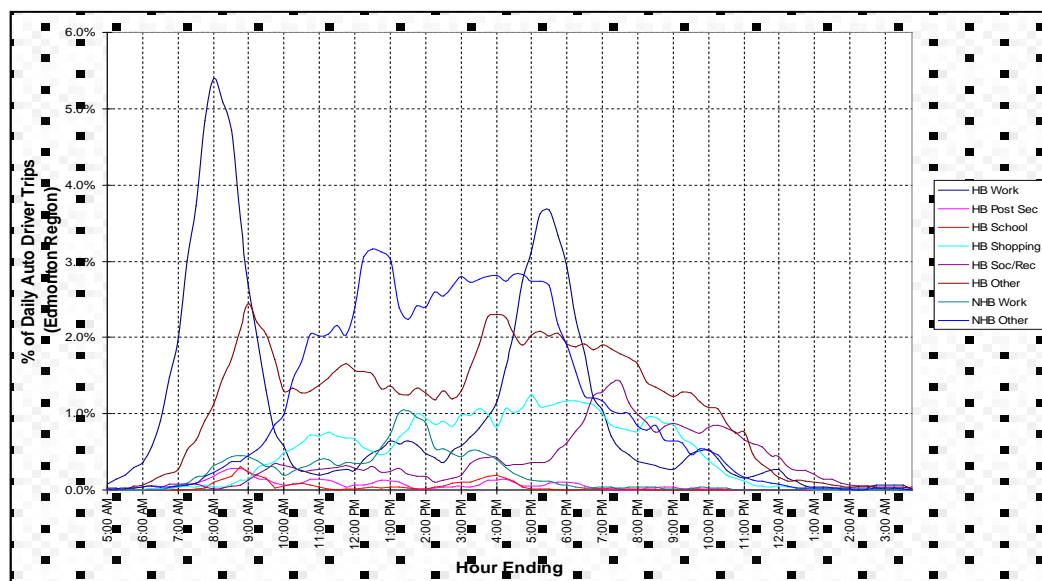


The distribution of all auto driver trips by time of day is presented in the following figures.

*Figure 3.28 - Distribution of Auto Driver Trips by Time of Day*
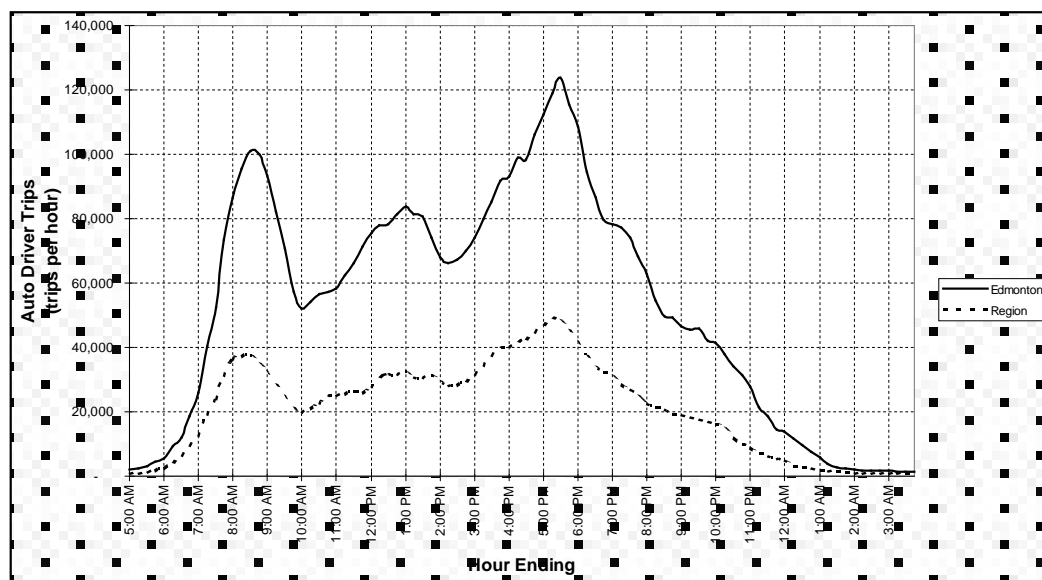


Auto driver volumes by time of day are virtually identical for trips made by residents of the City of Edmonton and residents of the Edmonton Region. The morning peak hour takes place between 7:30AM and 8:30AM when just over 8% of the daily auto driver trips takes place.

The afternoon auto driver peak hour (4:30PM to 5:30PM) is even greater than the morning peak hour, when approximately 10% of all auto driver trips takes place.

*Figure 3.29 - Distribution of Auto Driver Trips by Time of Day (% of Daily Trips)*
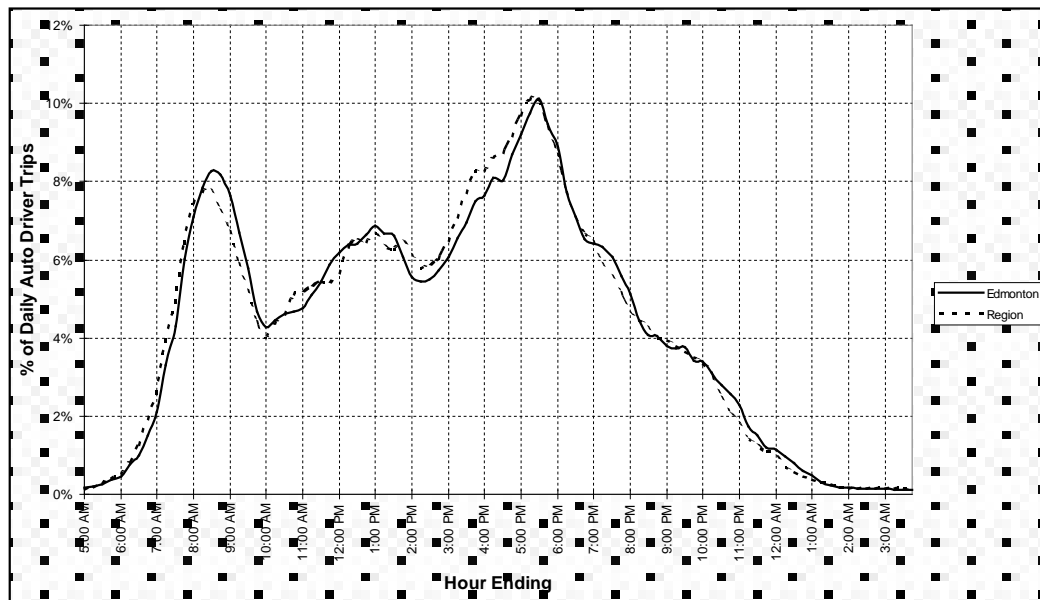
### 3.4.3  Trip Length and Travel Time (City of Edmonton)

The average trip length (kilometres) and travel time (minutes) for all auto driver trips made by residents of the City of Edmonton are presented below.  The auto driver trip length is slightly longer and trip time slightly shorter than for all trips combined.

*Table 3.13 - Average Auto Driver Trip Length and Travel Time by Trip Purpose - City of Edmonton*

| *City of Edmonton* | Auto driver trips | % | Auto-driver km | % | Average trip length (km) | Average trip time (min) |
|---|---|---|---|---|---|---|
| HB Work | 283,268 | 23.2% | 3,205,490 | 32.5% | 11.3 | 24.4 |
| HB Post Sec | 23,694 | 1.9% | 219,450 | 2.2% | 9.3 | 23.9 |
| HB School | 5,416 | 0.4% | 32,327 | 0.3% | 6.0 | 16.3 |
| HB Shopping | 145,970 | 11.9% | 701,544 | 7.1% | 4.8 | 15.2 |
| HB Soc/Rec | 105,572 | 8.6% | 907,928 | 9.2% | 8.6 | 20.2 |
| HB Other | 330,105 | 27.0% | 2,392,000 | 24.3% | 7.2 | 17.5 |
| NHB Work | 52,237 | 4.3% | 469,267 | 4.8% | 9.0 | 21.2 |
| NHB Other | 275,443 | 22.5% | 1,932,117 | 19.6% | 7.0 | 18.3 |
| TOTAL | 1,221,704 | 100.0% | 9,860,123 | 100.0% | 8.1 | 19.5 |

The total distance traveled by auto drivers who live in the City of Edmonton on an average weekday is estimated to be 9,900,000 kilometres.  The average trip length for these auto driver trips is approximately 8.1 km per trip.  The work trip has the longest average trip length at 11.3 km while shopping trips are the shortest with an average of 4.8 km per trip.

An average travel time of about 20 minutes is observed for these auto driver trips. Shopping trips have on average the shortest travel time, with each trip taking about 15 minutes, while work trips have the longest average travel time of 24 minutes.

*Figure 3.30 - Average Auto Driver Trip Length and Travel Time by Trip Purpose - City of Edmonton*
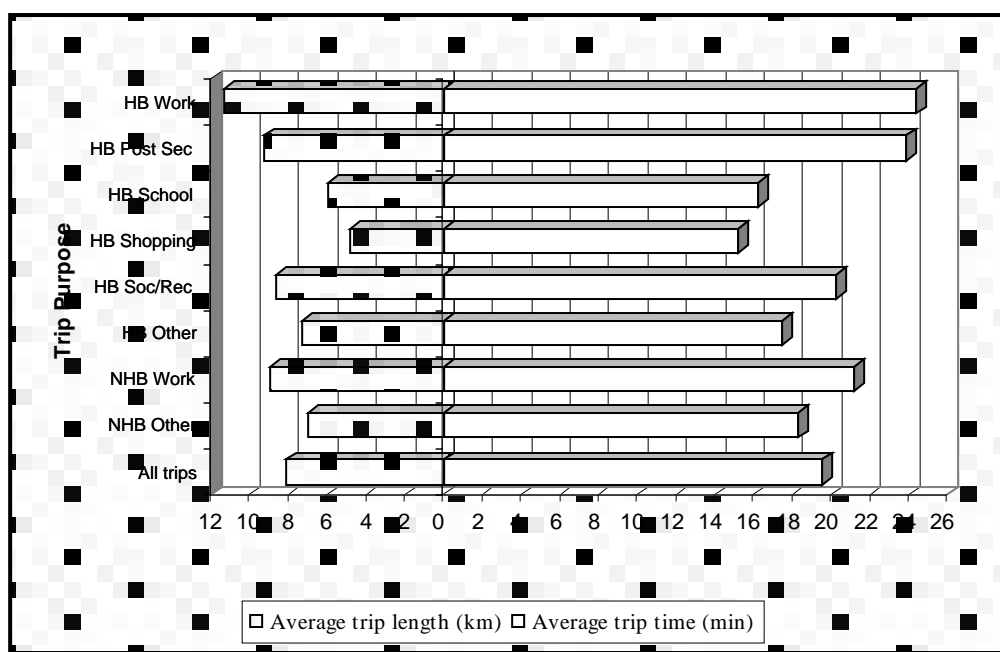
### 3.4.4  Auto Occupancy

*Table 3.14 - Auto Occupancy by Auto Driver Trip Purpose*

|              | City of Edmonton | Edmonton Region |
|--------------|------------------|-----------------|
| HB Work      | 1.09             | 1.10            |
| HB Post Sec  | 1.12             | 1.14            |
| HB School    | 1.36             | 1.48            |
| HB Shopping  | 1.53             | 1.56            |
| HB Soc/Rec   | 1.59             | 1.72            |
| HB Other     | 1.59             | 1.63            |
| NHB Work     | 1.18             | 1.17            |
| NHB Other    | 1.45             | 1.52            |
| TOTAL        | 1.41             | 1.45            |

The average auto occupancy of private automobiles driven by residents of the City of Edmonton is 1.41 persons per vehicle. The occupancy rate is slightly higher for vehicles driven by residents of the Edmonton region (1.45 persons per vehicle).

Trips made to and from work have the lowest vehicle occupancy (1.1 persons per vehicle) while the average occupancy rate for shopping, social-recreation and other trips is as high as 1.7 persons per vehicle in the region. Of interest is the fact that shorter distance trips tend to have a higher vehicle occupancy. As the trip length increases, the vehicle occupancy is observed to decrease. This is partly due to the fact that shopping and other trips such as for personal business have both a shorter trip length and a higher occupancy.

*Figure 3.31 - Auto Occupancy by Auto Driver Trip Purpose*
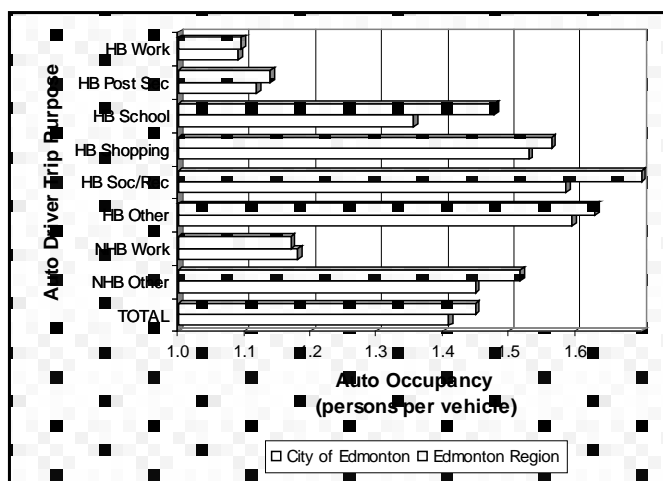


*Figure 3.32 - Auto Occupancy by Auto Driver Trip Length (km)*
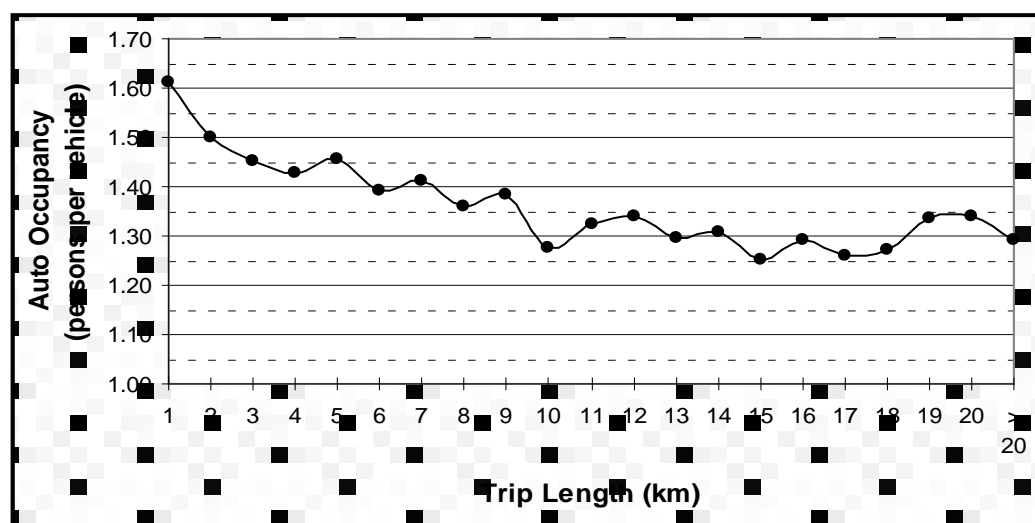
### 3.4.5  Alternate Travel Choice (City of Edmonton residents)

If the mode used for the current trip was not available, for whatever reason, the survey respondents where asked for an alternate mode choice which they would then use to complete the trip. For auto drivers, the most popular alternate travel choice was as auto passenger in another vehicle. About 28% of the auto drivers would still use an automobile but would have someone else drive in order to complete the trip. One in five auto drivers indicated that they would choose to use public transit (bus and/or LRT) to complete the trip while 9% said they would walk. Fully one-third of the drivers said that they would not make the trip at all if they could not drive. And 3% of drivers indicated they would use another vehicle and still drive.

*Table 3.15 - Alternate Travel Choice for Auto Drivers*

| Alternate mode | Auto driver trips | % |
|---|---|---|
| No response | 32,954 | 2.7% |
| Drive other vehicle | 42,109 | 3.4% |
| Auto passenger | 344,987 | 28.2% |
| Transit | 248,001 | 20.3% |
| School/private bus | 564 | 0.0% |
| Walk | 109,270 | 8.9% |
| Bicycle | 14,184 | 1.2% |
| Other | 22,534 | 1.8% |
| Would not make trip | 407,100 | 33.3% |
| TOTAL | 1,221,704 | 100.0% |

The alternate travel choice depends to a great extent on the purpose of the trip. Some trips, such as work trips, must be made while others, such as shopping are discretionary and more people can choose not to make the trip.

*Figure 3.33 - Alternate Mode Choice for Auto Drivers*



*Figure 3.34 - Alternate Mode Choice by Trip Purpose for Auto Drivers*
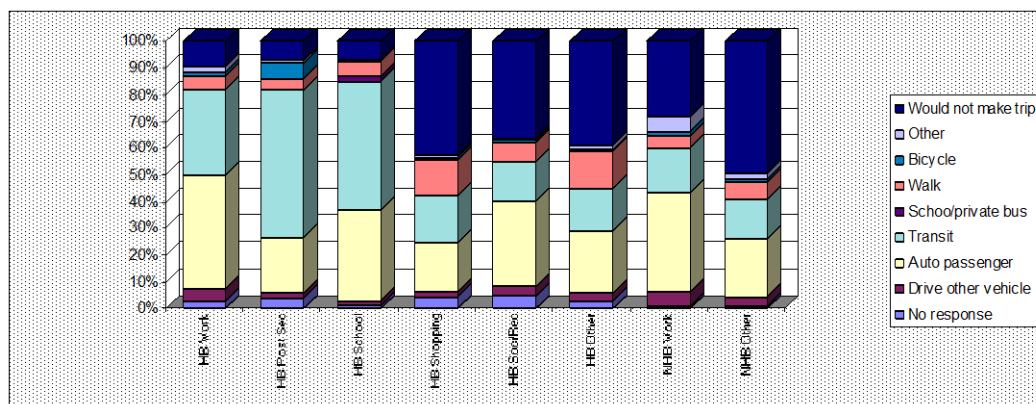
## 3.5  Auto Passenger Trips

Nearly three-quarters of a million auto passenger trips are made in the Edmonton CMA each day of which about 525,000 are made by residents of the City of Edmonton.

### 3.5.1  Trip Purpose
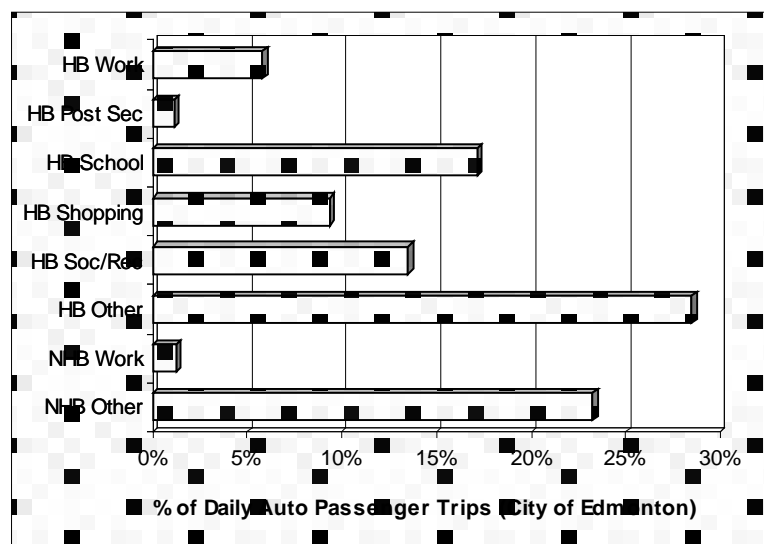
*Table 3.16 - Trip Purposes (Daily Auto Passenger Trips)*

| Trip Purpose | City of Edmonton | | Edmonton Region | |
|---|---|---|---|---|
| | Daily Auto Passenger Trips | % | Daily Auto Passenger Trips | % |
| Home-based Work | 30,631 | 5.8% | 8,440 | 3.9% |
| Home-based Post Secondary | 6,013 | 1.1% | 1,000 | 0.5% |
| Home-based School | 90,514 | 17.2% | 29,187 | 13.5% |
| Home-based Shopping | 49,494 | 9.4% | 17,307 | 8.0% |
| Home-based Social/Recreation | 71,179 | 13.5% | 37,713 | 17.4% |
| Home-based Other | 150,172 | 28.5% | 60,926 | 28.1% |
| *Home-based Sub-total* | *398,002* | *75.5%* | *154,574* | *71.3%* |
| Non home-based Work | 6,706 | 1.3% | 2,250 | 1.0% |
| Non home-based Other | 122,491 | 23.2% | 59,845 | 27.6% |
| *Non home-based Sub-total* | *129,197* | *24.5%* | *62,096* | *28.7%* |
| *TOTAL* | *527,199* | *100.0%* | *216,670* | *100.0%* |

Of auto passenger trips made by City residents, three-quarters are made either to or from the home. The major trip purposes are those which are classified as 'other' trips (such as personal business, eat a meal or pick-up/drop-off a passenger)

The second most common trip purpose for auto passengers is to go to school. Approximately 17% of all City of Edmonton auto passenger trips are made for this purpose. Social-

*Figure 3.35 - Trip Purpose for Daily Auto Passenger Trips in the City of Edmonton*



recreation trips account for about 14% of the auto passenger trips in the City and 17% in the Edmonton region.

The specific trip purposes for auto passenger trips which fall into the generalized 'other' trip purpose are presented as follows.

*Table 3.17 - Other Trip Purposes  - City of Edmonton (Daily Auto Passenger Trips)*

| Trip Purpose | Home-based Other | % | Non-home based Other | % |
|---|---|---|---|---|
| Work related | 4,568 | 3.0% | 3,564 | 2.9% |
| Pre-school/daycare | n/a | n/a | 4,753 | 3.9% |
| Grade school | n/a | n/a | 6,288 | 5.1% |
| Post-secondary | n/a | n/a | 398 | 0.3% |
| Social-recreation | n/a | n/a | 16,725 | 13.7% |
| Shopping | n/a | n/a | 22,871 | 18.7% |
| Eat a meal | 19,494 | 13.0% | 13,749 | 11.2% |
| Personal business | 32,111 | 21.4% | 10,609 | 8.7% |
| PU/DO passengers | 6,688 | 4.5% | 2,270 | 1.9% |
| Change mode | 2,385 | 1.6% | 1,243 | 1.0% |
| Along for the ride | 71,739 | 47.8% | 36,647 | 29.9% |
| Other | 13,187 | 8.8% | 3,373 | 2.8% |
| TOTAL | 150,172 | 100.0% | 122,491 | 100.0% |

In the City of Edmonton, nearly half of the auto passengers which are classified as 'other' stated that their trip purpose was 'along for the ride'.  These trips generally involve children who are traveling with their parents while their parents run errands, or passengers who are simply joining the auto driver while the driver has a specific trip purpose.

Of the non home-based 'other' trips, 'along for the ride' was again the predominant trip purpose followed by shopping, social/recreation and eat a meal trips.

*Figure 3.36 - Other Auto Passenger Trip Purposes (City of Edmonton)*
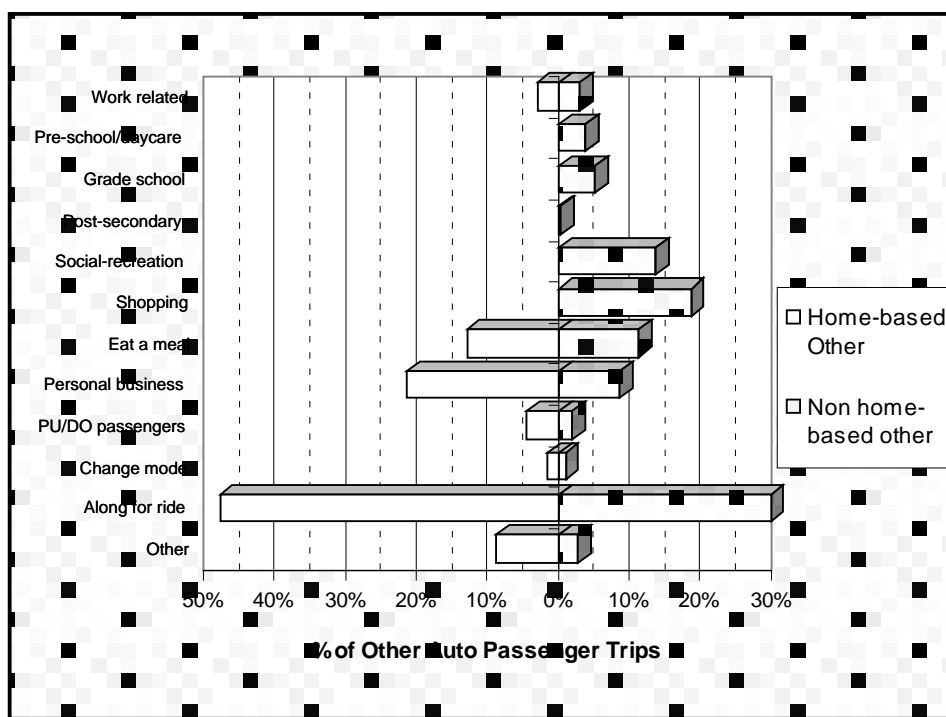
## 3.5.2  Trips by Time of Day

*Figure 3.37 - Distribution of Auto Passenger Trips by Trip Purpose and Time of Day (City of Edmonton)*
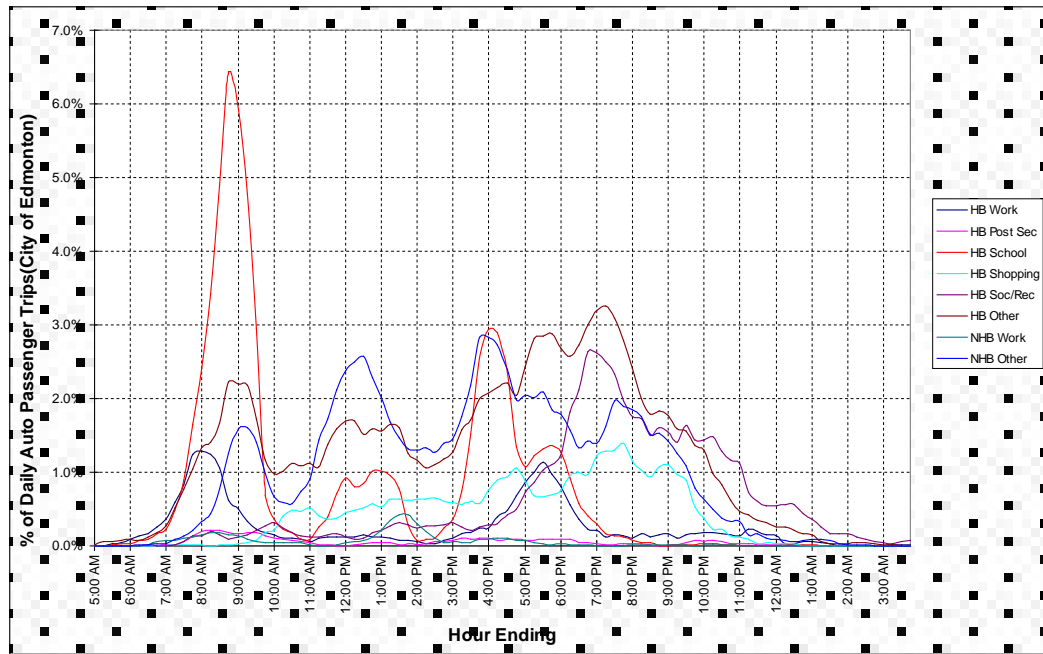


As illustrated in these figures, the home-based school trip is the pre-dominant auto passenger trip purpose during the AM peak period.  In the City, over 6% of the daily auto passenger trips are to go to school in the morning.  School passenger trips again increase during the lunch hour and between 3:00PM and 4:00PM.  Throughout the rest of the day, the 'other' trip purpose accounts for the majority of auto passenger trips, with peak activity occurring during lunch and during the late afternoon and early evening hours.

*Figure 3.38 - Distribution of Auto Passenger Trips by Trip Purpose and Time of Day (Edmonton Region)*
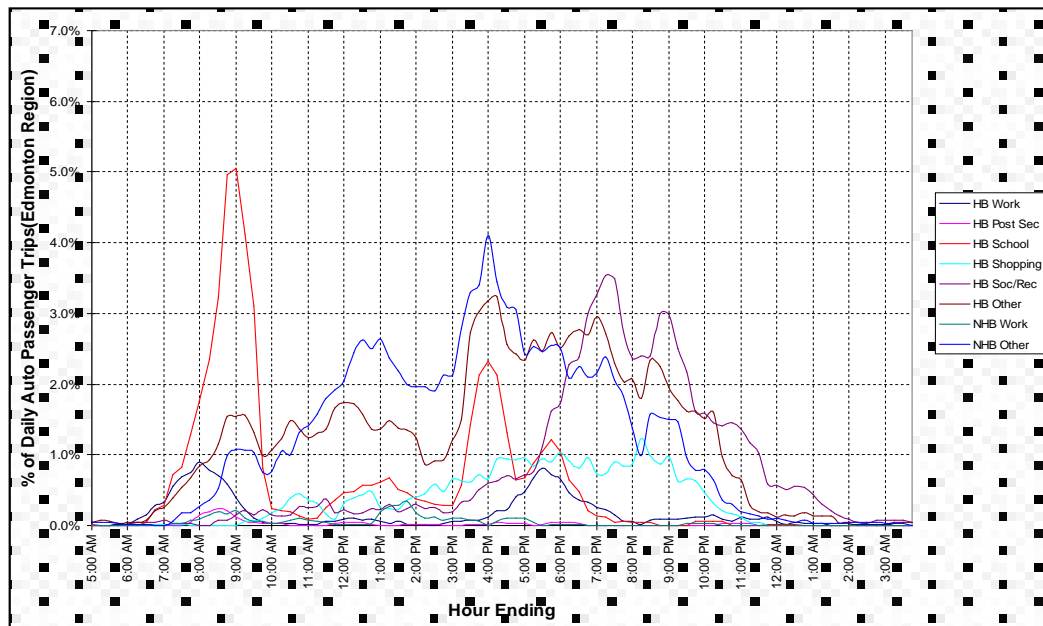
The distribution of all auto passenger trips by time of day is presented in the following figures.

*Figure 3.39 - Distribution of Auto Passenger Trips by Time of Day*
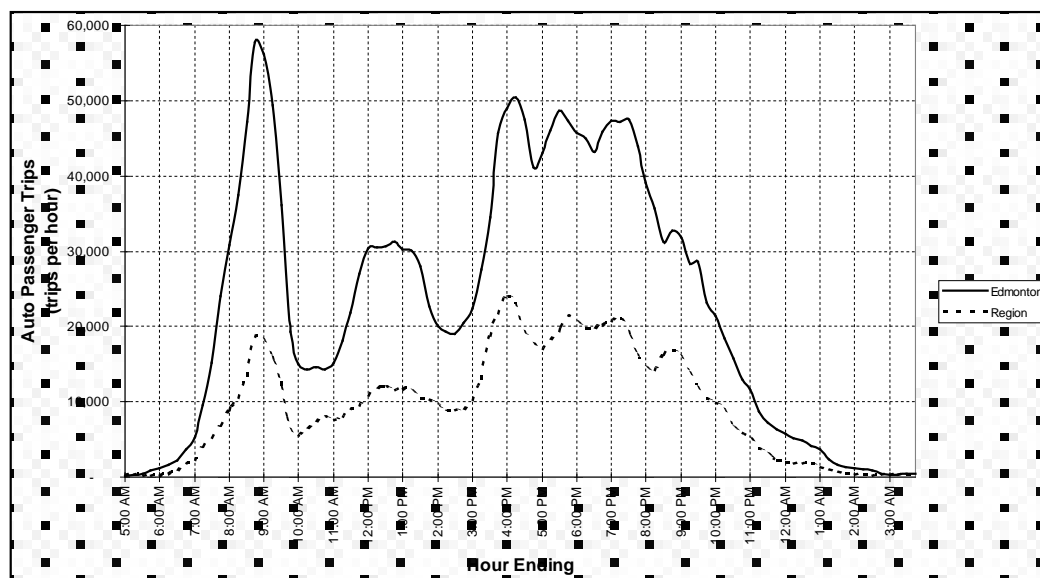


*Figure 3.40 - Distribution of Auto Passenger Trips by Time of Day (% of daily trips)*
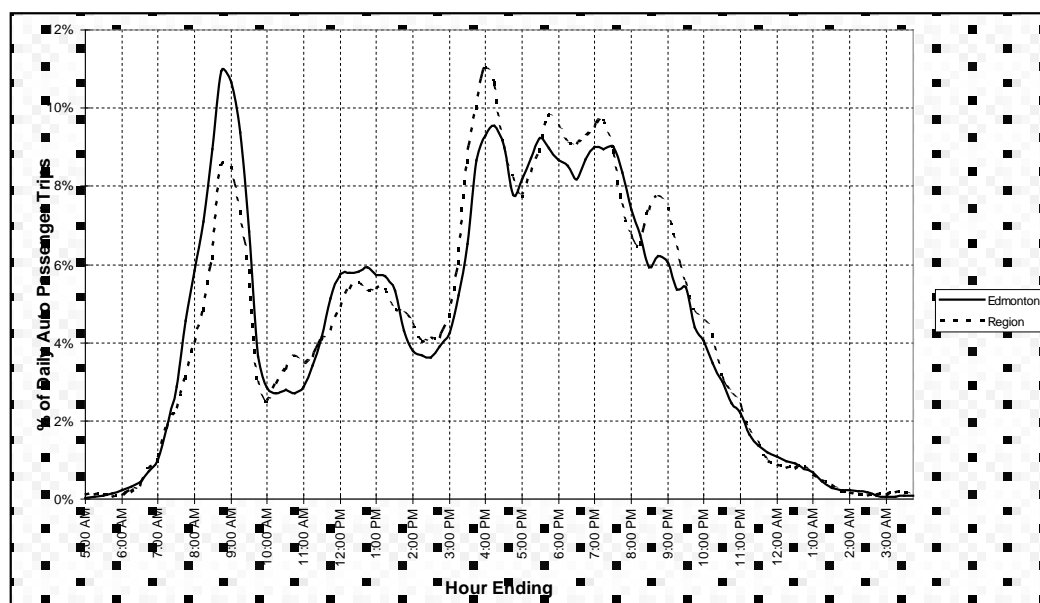


Auto passenger trips show a sharp peak of activity between 7:45AM and 8:45AM when about 11% of all City of Edmonton auto passenger trips occur. The afternoon peak of auto passenger trips is spread out over nearly four hours when, between 3:30PM and 7:30PM, approximately 35% of all auto passenger trips takes place.

### 3.5.3  Trip Length and Travel Time (City of Edmonton)

The average trip length (kilometres) and travel time (minutes) for all auto passenger trips made by residents of the City of Edmonton are presented below.

*Table 3.18 - Average Auto Passenger Trip Length and Travel Time by Trip Purpose - City of Edmonton*

| *City of Edmonton* | Auto passenger trips | % | Auto-passenger km | % | Average trip length (km) | Average trip time (min) |
|---|---|---|---|---|---|---|
| HB Work | 30,631 | 5.8% | 269,724 | 8.4% | 8.8 | 19.1 |
| HB Post Sec | 6,013 | 1.1% | 56,946 | 1.8% | 9.5 | 23.6 |
| HB School | 90,514 | 17.2% | 316,558 | 9.9% | 3.5 | 14.0 |
| HB Shopping | 49,494 | 9.4% | 249,898 | 7.8% | 5.0 | 16.5 |
| HB Soc/Rec | 71,179 | 13.5% | 579,592 | 18.1% | 8.1 | 17.7 |
| HB Other | 150,172 | 28.5% | 953,525 | 29.8% | 6.3 | 17.1 |
| NHB Work | 6,706 | 1.3% | 55,314 | 1.7% | 8.2 | 16.1 |
| NHB Other | 122,491 | 23.2% | 716,598 | 22.4% | 5.9 | 14.0 |
| TOTAL | 527,199 | 100.0% | 3,198,155 | 100.0% | 6.1 | 16.0 |

The total distance traveled by passengers in private automobiles in the City of Edmonton on an average weekday is about 3.2 million kilometres. The average trip length for auto passengers is about two kilometres less than that for auto drivers with the school trip having the shortest average trip length at 3.5 kilometres.

An average travel time of about 16 minutes is observed for auto passenger trips, which is about four minutes less than the average auto driver travel time. School and shopping trips are amongst the shortest time (14 to 16 minutes) while post-secondary trips have the longest average travel time of about 24 minutes.

*Figure 3.41 - Average Auto Passenger Trip Length and Travel Time by Trip Purpose - City of Edmonton*
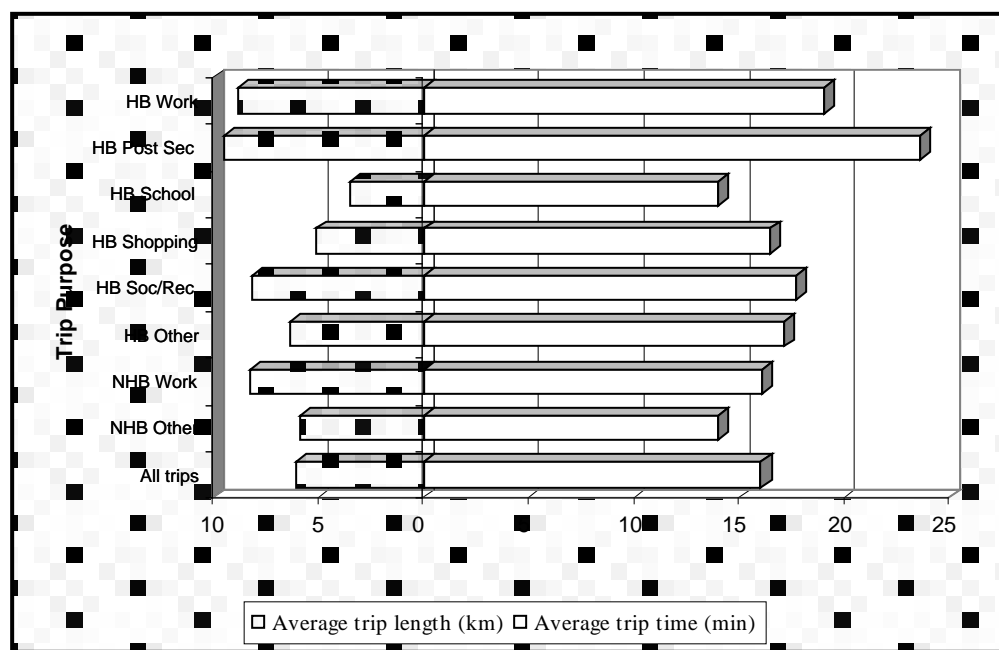
### 3.5.4 Alternate Travel Choice (City of Edmonton residents)

More than one-third of the auto passenger trips would not be made if the person could not get a ride with their current driver. Interestingly enough, the most popular alternate travel choice for auto passengers was...... auto passenger. What this means is that instead of riding as a passenger with their current driver, the person would simply find another driver to take them to their destination.

*Table 3.19 - Alternate Travel Mode for Auto Passengers*

| Alternate mode | Auto driver trips | % |
|---|---|---|
| No response | 12,892 | 2.4% |
| Auto driver | 32,892 | 6.2% |
| Passenger (other veh) | 107,708 | 20.4% |
| Transit | 100,950 | 19.1% |
| School/private bus | 4,067 | 0.8% |
| Walk | 70,784 | 13.4% |
| Bicycle | 1,636 | 0.3% |
| Other | 5,785 | 1.1% |
| Would not make trip | 190,485 | 36.1% |
| TOTAL | 527,199 | 100.0% |

One out of five passengers would switch to public transit while 13% would choose to walk. Only 6% of the auto passengers chose auto driver as their alternate mode choice. This implies that most auto passengers either do not drive (i.e. children who are too young to drive) or do not have access to a vehicle.

The alternative to being an auto passenger varies considerably depending on trip purpose. Most work and post-secondary trips would switch to transit while most school trips would choose to walk. For most of the remaining trip purposes, the trip would likely not have been made.
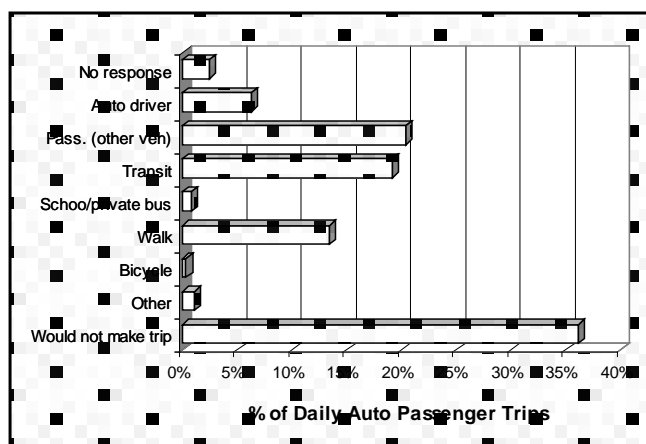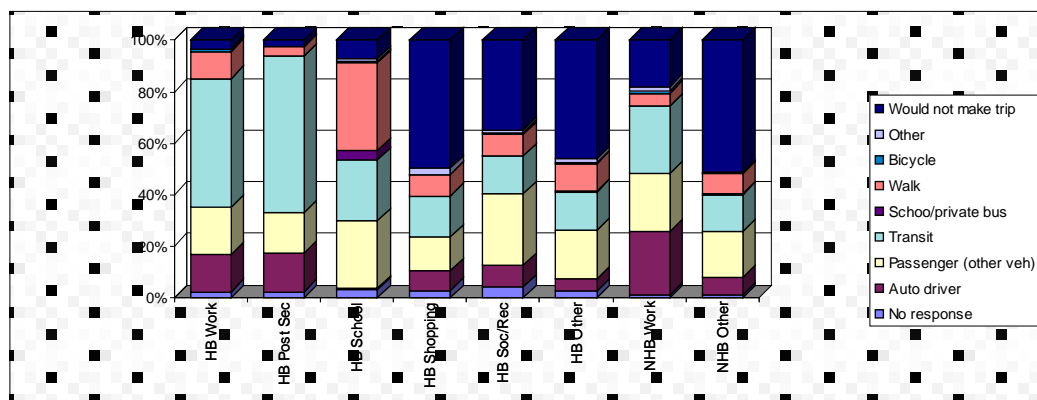
*Figure 3.42 - Alternate Mode Choice for Auto Passengers*



*Figure 3.43 - Alternate Mode Choice by Trip Purpose for Auto Passengers*

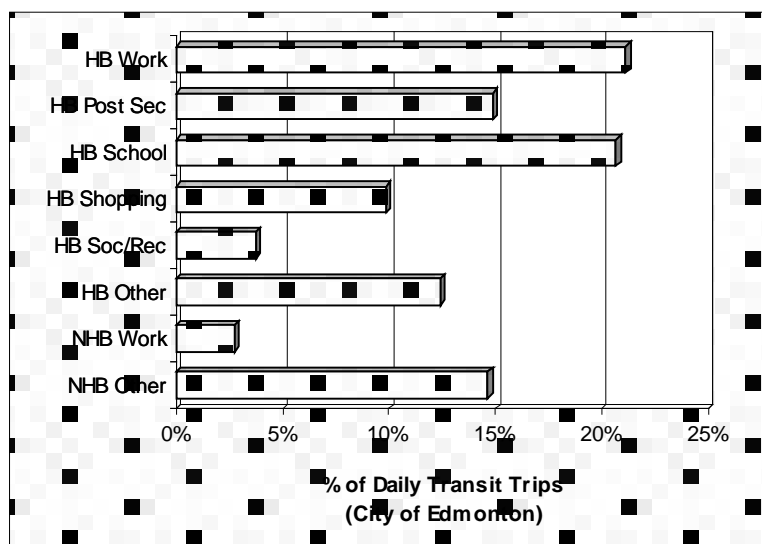## 3.6 Transit Trips

### 3.6.1 Trip Purpose

In the City of Edmonton, approximately 194,000 public transit trips are made each weekday. These trips are either by bus, LRT, or a combination of bus and LRT.

*Table 3.20 - Trip Purposes (Daily Transit Trips)*

| Trip Purpose | City of Edmonton | | Edmonton Region | |
|---|---|---|---|---|
| | Daily Transit Trips | % | Daily Transit Trips | % |
| Home-based Work | 41,015 | 21.1% | 2,324 | 24.4% |
| Home-based Post Secondary | 28,888 | 14.9% | 1,446 | 15.2% |
| Home-based School | 40,171 | 20.7% | 2,584 | 27.1% |
| Home-based Shopping | 19,092 | 9.8% | 129 | 1.4% |
| Home-based Social/Recreation | 7,246 | 3.7% | 87 | 0.9% |
| Home-based Other | 24,103 | 12.4% | 487 | 5.1% |
| *Home-based Sub-total* | *160,516* | *82.6%* | *7,059* | *74.1%* |
| Non home-based Work | 5,355 | 2.8% | 645 | 6.8% |
| Non home-based Other | 28,437 | 14.6% | 1,823 | 19.1% |
| *Non home-based Sub-total* | *33,792* | *17.4%* | *2,467* | *25.9%* |
| **TOTAL** | **194,308** | **100.0%** | **9,526** | **100.0%** |

School trips and post-secondary trips make up over one-third of all transit trips on a typical weekday. Work trips account for just over 20% of all transit trips while 'other' trips (home-based and non home-based) comprise nearly 30% of transit trips. Transit trips for the more discretionary purposes such as shopping and social-recreation are not as popular.

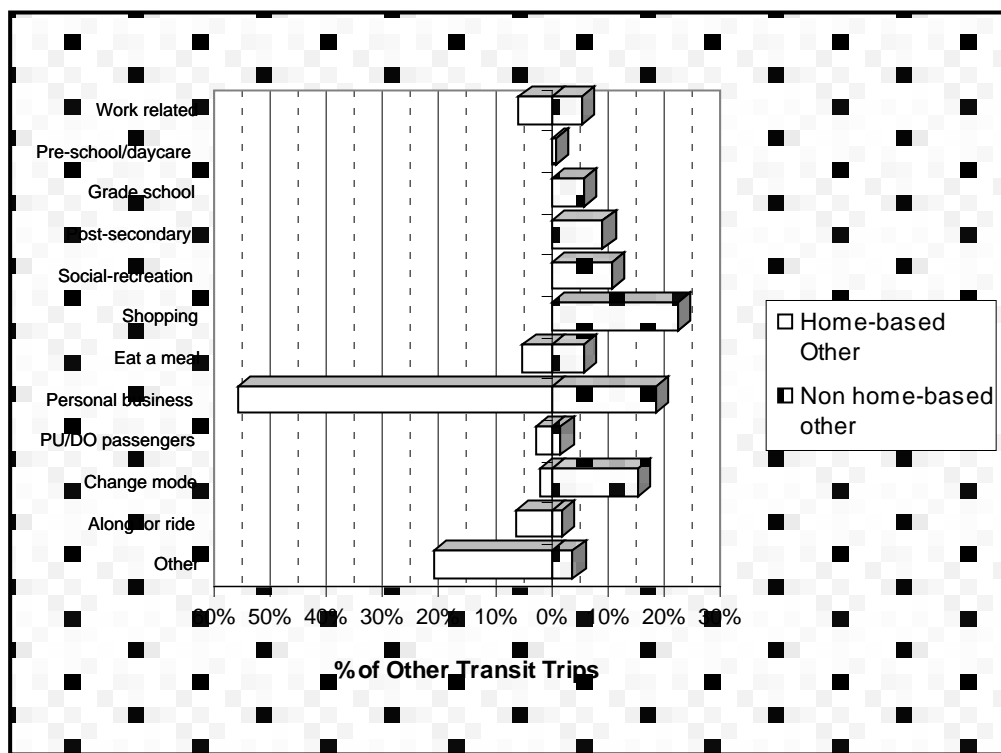*Figure 3.44 - Trip Purpose for Daily Transit Trips in the City of Edmonton*

The specific trip purposes for transit trips which fall into the generalized 'other' trip purpose are presented below.

*Table 3.21 - Other Trip Purposes  - City of Edmonton (Daily Transit Trips)*

| Trip Purpose | Home-based Other | % | Non-home based Other | % |
|---|---|---|---|---|
| Work related | 1,445 | 6.0% | 1,477 | 5.2% |
| Pre-school/daycare | n/a | n/a | 194 | 0.7% |
| Grade school | n/a | n/a | 1,576 | 5.5% |
| Post-secondary | n/a | n/a | 2,570 | 9.0% |
| Social-recreation | n/a | n/a | 3,028 | 10.6% |
| Shopping | n/a | n/a | 6,386 | 22.5% |
| Eat a meal | 1,263 | 5.2% | 1,617 | 5.7% |
| Personal business | 13,482 | 55.9% | 5,253 | 18.5% |
| PU/DO passengers | 687 | 2.8% | 436 | 1.5% |
| Change mode | 552 | 2.3% | 4,358 | 15.3% |
| Along for ride | 1,578 | 6.5% | 486 | 1.7% |
| Other | 5,098 | 21.1% | 1056 | 3.7% |
| TOTAL | 24,103 | 100.0% | 28,437 | 100.0% |

More than half of all home-based 'other' trips are made for personal business.  Only 6% of these type of transit trips are work-related and 5% are to eat a meal. A few people indicated that their trip purpose was just to be along for the ride.  These trips include mostly children who are accompanying their parents on their bus trip.

*Figure 3.45 - Other Transit Trip Purposes (City of Edmonton)*

### 3.6.2  Trips by Time of Day (City of Edmonton)

The distribution of daily transit trips by trip purpose for each hour in a typical weekday is illustrated below.

*Figure 3.46 - Distribution of Transit Trips by Trip Purpose and Time of Day (City of Edmonton)*
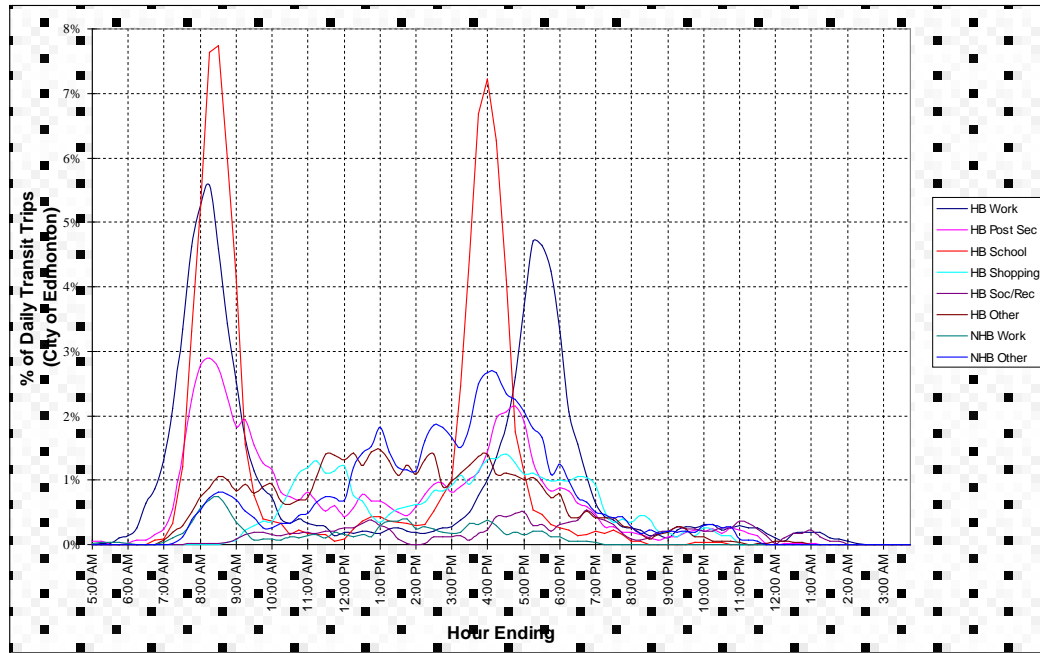


Peak transit activity in the City of Edmonton occurs between 7:15AM and 8:15AM when about 18% (37,000) of the daily transit trips takes place.  The afternoon peak hour for transit is observed to be between 3:15PM and 4:15PM when about 32,000 (16%) transit trips are made on the public transit system.

*Figure 3.47 - Distribution of Transit  Trips by Time of Day (City of Edmonton)*
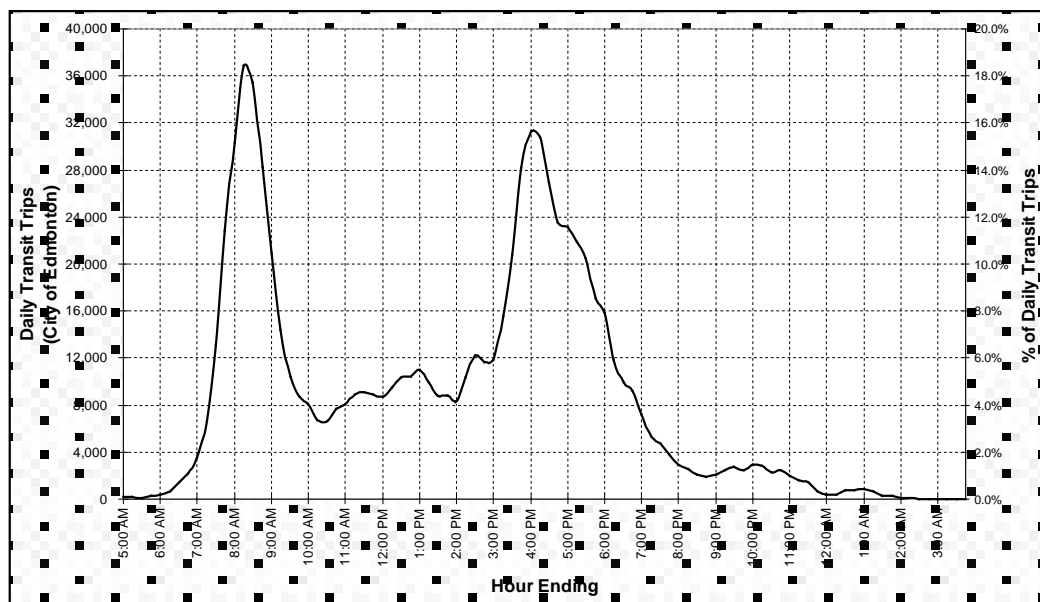
### 3.6.3  Trip Length and Travel Time (City of Edmonton)

The average trip length (kilometres) and travel time (minutes) for all transit trips made by residents of the City of Edmonton are presented below.  Trip length is about the same but travel time is much longer than for auto driver/passenger trips.

*Table 3.22 - Average Transit Trip Length and Travel Time by Trip Purpose - City of Edmonton*

| *City of Edmonton* | Transit trips | % | Person km | % | Average trip length (km) | Average trip time (min) |
|---|---|---|---|---|---|---|
| HB Work | 41,015 | 21.1% | 368,146 | 27.3% | 9.0 | 41.1 |
| HB Post Sec | 28,888 | 14.9% | 232,908 | 17.3% | 8.1 | 37.4 |
| HB School | 40,171 | 20.7% | 235,364 | 17.5% | 5.9 | 34.2 |
| HB Shopping | 19,092 | 9.8% | 92,627 | 6.9% | 4.9 | 30.5 |
| HB Soc/Rec | 7,246 | 3.7% | 53,620 | 4.0% | 7.4 | 34.2 |
| HB Other | 24,103 | 12.4% | 152,621 | 11.3% | 6.3 | 39.0 |
| NHB Work | 5,355 | 2.8% | 33,432 | 2.5% | 6.2 | 24.8 |
| NHB Other | 28,437 | 14.6% | 179,370 | 13.3% | 6.3 | 26.8 |
| TOTAL | 194,308 | 100.0% | 1,348,088 | 100.0% | 6.9 | 35.0 |

The total distance traveled by transit passengers who are residents of the City of Edmonton on an average weekday is estimated to be about 1.3 million kilometres.  The average trip length for these transit trips is about seven kilometres per trip.  The work trip has the longest average trip length at nine kilometres while shopping trips are the shortest with an average of around five kilometres.

An average travel time of about 35 minutes is observed for all transit trips on any given weekday.  The work trip is the longest, at an average of 41 minutes per trip while non-home based trips are the shortest transit trips, averaging around 25 minutes per trip.

*Figure 3.48 - Average Transit Trip Length and Travel Time by Trip Purpose - City of Edmonton*
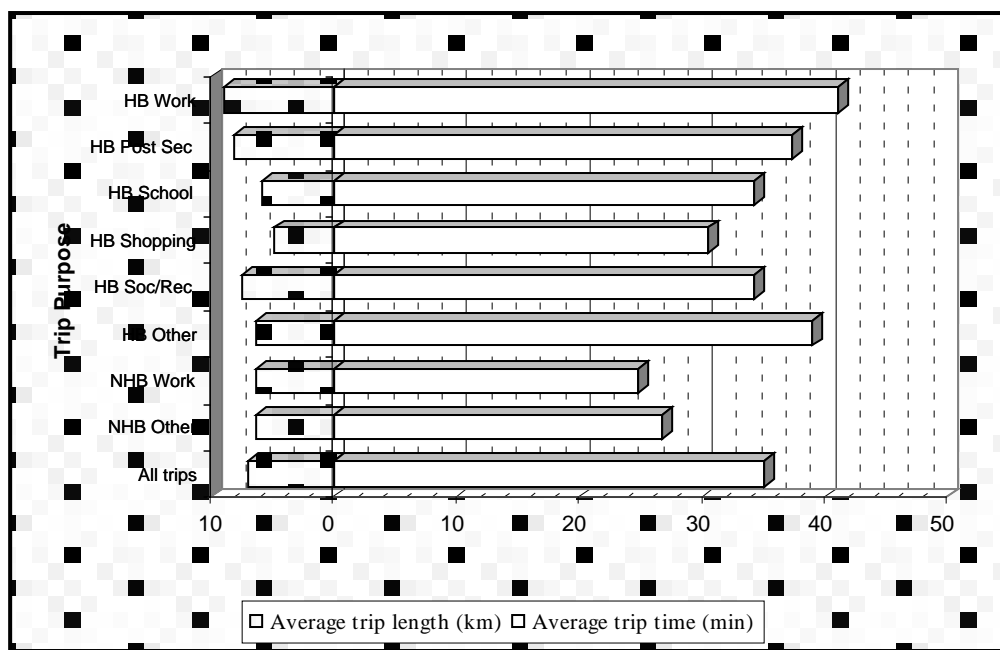
### 3.6.4 Alternate Travel Choice (City of Edmonton residents)

Most transit passengers (41%) would choose to ride as an auto passenger if they could not take a bus or ride the LRT to their destination. About 13% indicated that they would choose to walk while 16% said they could drive a car instead of taking the bus.

*Table 3.23 - Alternate Travel Choice for Transit*

| Alternate mode | Transit trips | % |
|---|---:|---:|
| No response | 4,430 | 2.3% |
| Auto driver | 30,178 | 15.5% |
| Auto passenger | 80,535 | 41.4% |
| Alternate transit route | 10,015 | 5.2% |
| School/private bus | 1,152 | 0.6% |
| Walk | 25,041 | 12.9% |
| Bicycle | 3,612 | 1.9% |
| Other | 3,616 | 1.9% |
| Would not make trip | 35,729 | 18.4% |
| TOTAL | 194,308 | 100.0% |

Just over 5% indicated that they would still take the bus, which implies that they would take an alternate transit route in place of their current transit route to get to their destination.

Only 18% of the transit passengers indicated that they would not make the trip if they could not ride the bus or take the LRT. This is considerably lower than the 36% of auto passengers and 33% of auto drivers who said that they would not make the trip if they could not use their car.

The choice of another mode instead of transit for different trip purposes is relatively stable. The predominant alternate mode choice is auto passenger for most trip purposes.
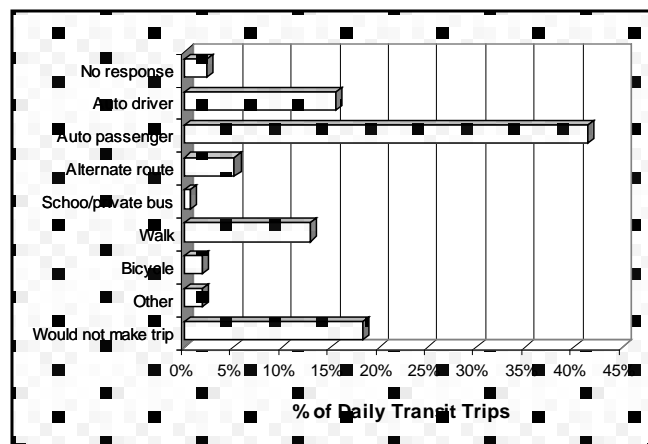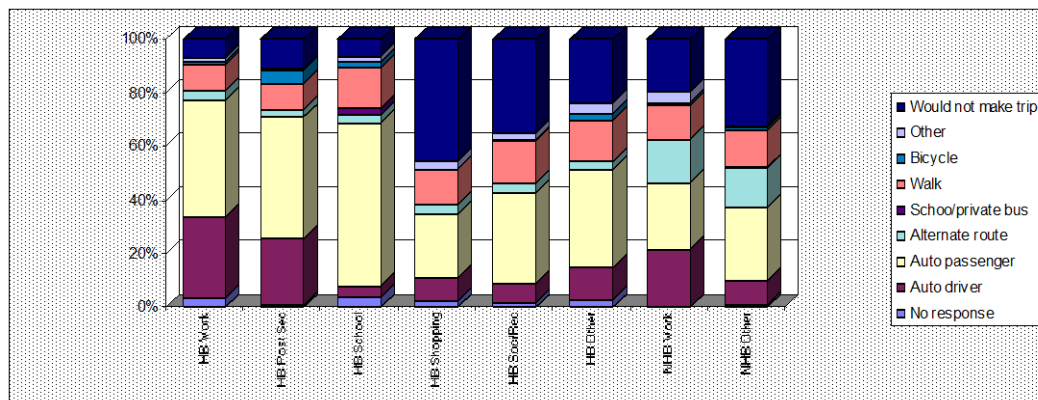
*Figure 3.49 - Alternate Mode Choice for Transit*



*Figure 3.50 - Alternate Mode Choice by Trip Purpose for Transit*

## 3.7  Walk Trips

### 3.7.1  Trip Purpose

Nearly 260,000 walk trips are made by residents of the City of Edmonton on a typical weekday. It is important to note that these include only those walk trips which are greater than 100 metres or more than 2 blocks. There are in actual fact considerably more walk trips made on any given day but the travel survey only measured those which met the criteria of a minimum of 100 metres (approximately 2 blocks).
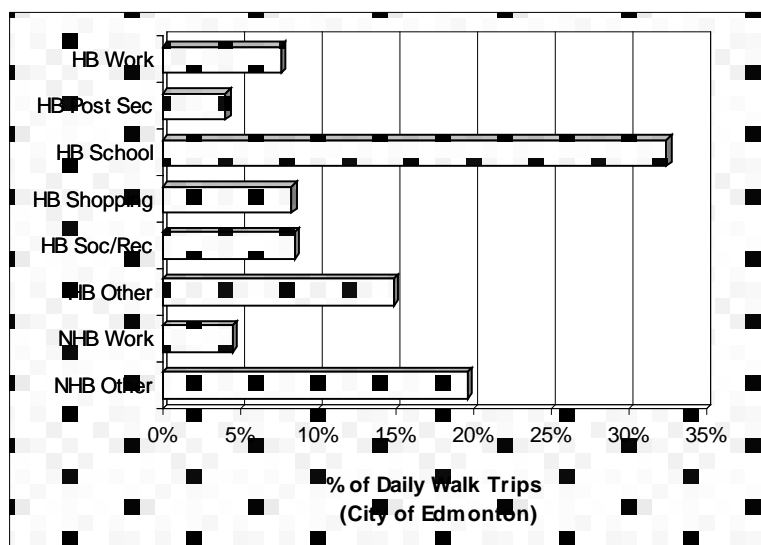
*Table 3.24 - Trip Purposes (Walk Trips)*

| Trip Purpose | City of Edmonton | | Edmonton Region | |
|---|---|---|---|---|
| | Daily Walk Trips | % | Daily Walk Trips | % |
| Home-based Work | 19,631 | 7.6% | 2,535 | 4.7% |
| Home-based Post Secondary | 10,464 | 4.1% | 42 | 0.1% |
| Home-based School | 83,684 | 32.5% | 29,612 | 54.6% |
| Home-based Shopping | 21,443 | 8.3% | 949 | 1.7% |
| Home-based Social/Recreation | 21,995 | 8.5% | 4,875 | 9.0% |
| Home-based Other | 38,406 | 14.9% | 7,002 | 12.9% |
| *Home-based Sub-total* | *195,622* | *75.9%* | *45,014* | *83.0%* |
| Non home-based Work | 11,506 | 4.5% | 1,798 | 3.3% |
| Non home-based Other | 50,660 | 19.7% | 7,452 | 13.7% |
| *Non home-based Sub-total* | *62,166* | *24.1%* | *9,250* | *17.0%* |
| *TOTAL* | *257,789* | *100.0%* | *54,264* | *100.0%* |

Almost one-third of walk trips in the City of Edmonton are made to or from school while in the Edmonton region, more than half of the walk trips are to go to/from school. Most of the remaining walk trips are evenly distributed across the various trip purposes such as work, shopping or social recreation.

The next most common trip purpose for walk trips in the City are those classified as 'other'.

*Figure 3.51 - Trip Purpose for Daily Transit Trips in the City of Edmonton*

The specific trip purposes for walk trips which fall into the generalized 'other' trip purpose are presented below.

*Table 3.25 - Other Trip Purposes  - City of Edmonton (Daily Walk Trips)*

| Trip Purpose | Home-based Other | % | Non-home based Other | % |
|---|---|---|---|---|
| Work related | 1,256 | 3.3% | 4,474 | 8.8% |
| Pre-school/daycare | n/a | n/a | 2,627 | 5.2% |
| Grade school | n/a | n/a | 4,860 | 9.6% |
| Post-secondary | n/a | n/a | 853 | 1.7% |
| Social-recreation | n/a | n/a | 6,454 | 12.7% |
| Shopping | n/a | n/a | 9,485 | 18.7% |
| Eat a meal | 2,570 | 6.7% | 10,935 | 21.6% |
| Personal business | 12,732 | 33.2% | 6,712 | 13.2% |
| PU/DO passengers | 12,795 | 33.3% | 297 | 0.6% |
| Change mode | 0 | 0.0% | 0 | 0.0% |
| Along for walk | 4,759 | 12.4% | 532 | 1.1% |
| Other | 4,294 | 11.2% | 3,431 | 6.8% |
| TOTAL | 38,406 | 100.0% | 50,660 | 100.0% |

One-third of the home-based walk trips are for personal business while another third are described as for picking up or dropping off a passenger.  For walk trips, this would mean accompanying a person on their trip or meeting them to walk home.  Parents bringing children to or from school are the most common examples of this trip purpose.

Of the non home-based 'other' walk trips, going to eat a meal is the pre-dominant trip purpose, followed closest by shopping.
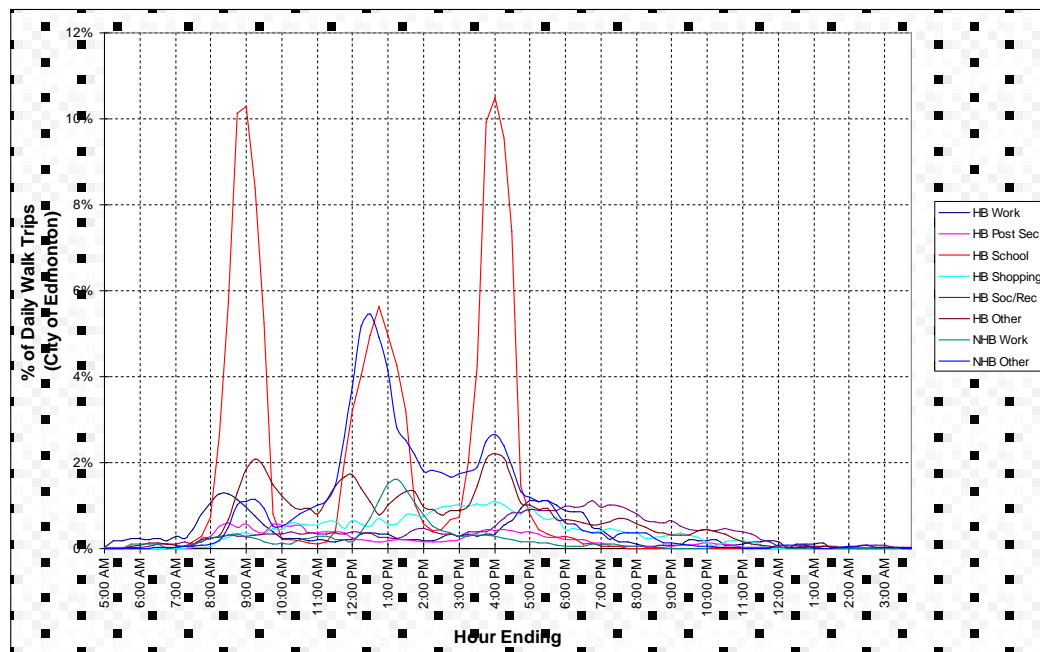
*Figure 3.52 - Other Walk Trip Purposes (City of Edmonton)*
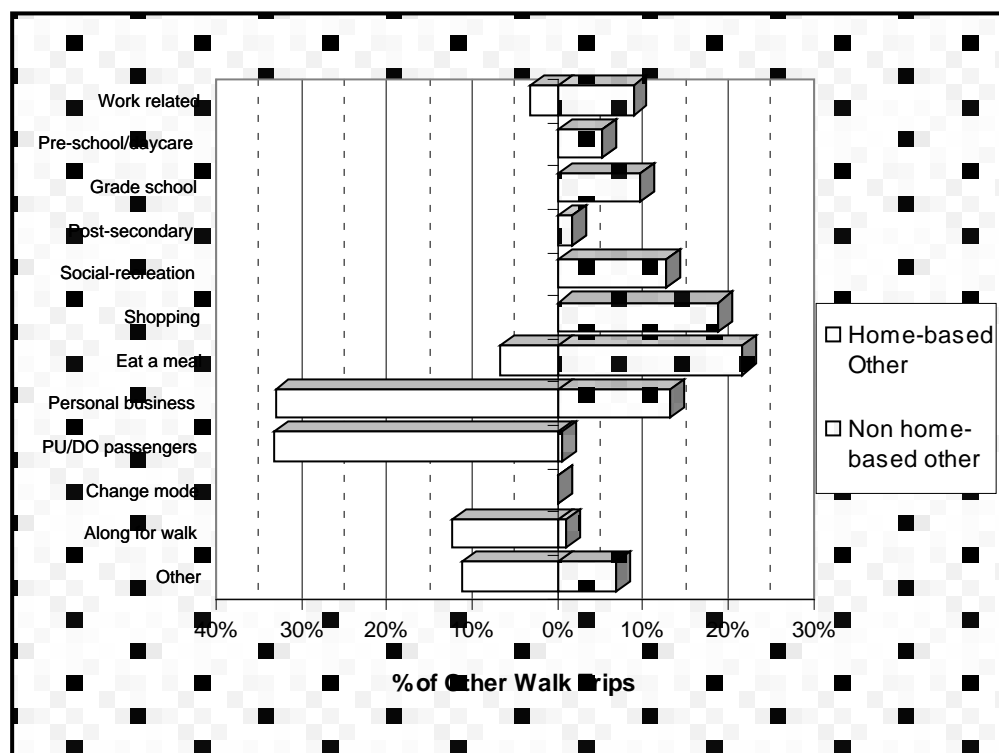
### 3.7.2  Trips by Time of Day (City of Edmonton)

The distribution of walk trips by trip purpose for each hour in a typical weekday is illustrated below.

*Figure 3.53 - Distribution of Walk Trips by Trip Purpose and Time of Day (City of Edmonton)*



Walk trips have three distinct peak hours; between 8:00AM and 9:00AM, when children go to school, between 11:45AM and 12:45PM when the school trip and non-home based other trips pre-dominate, and again between 3:00PM and 4:00PM when school children are returning home.

*Figure 3.54 - Distribution of Walk Trips by Time of Day (City of Edmonton)*
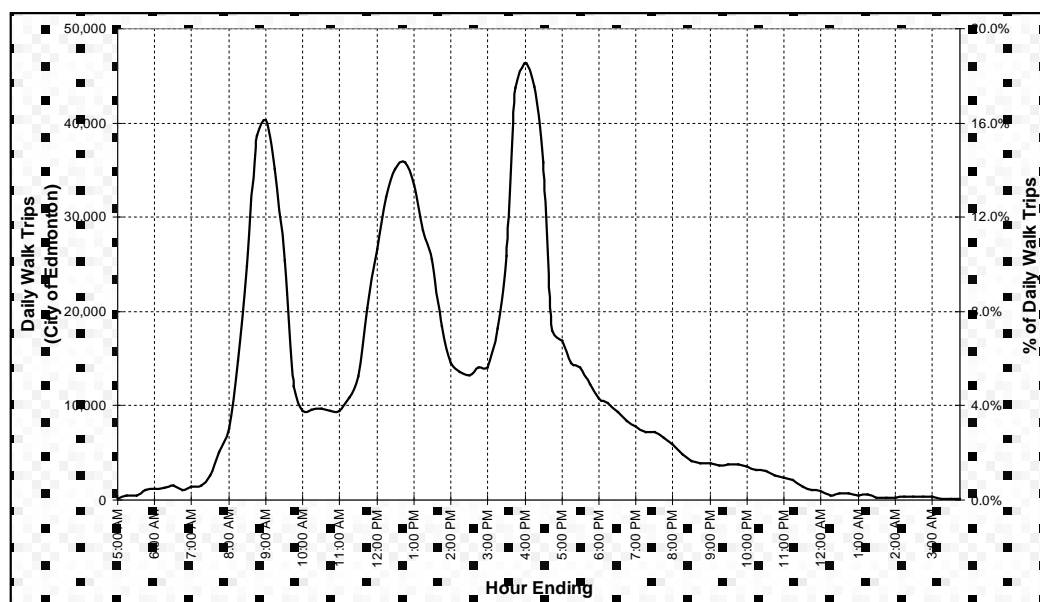
### 3.7.3  Trip Length and Travel Time

The average trip length (kilometres) and travel time (minutes) for all walk trips greater than 100 metres or 2 blocks which are made by residents of the City of Edmonton are presented below.

*Table 3.26 - Average Walk Trip Length and Travel Time by Trip Purpose - City of Edmonton*

| *City of Edmonton* | Walk trips | % | Walk km | % | Average trip length (km) | Average trip time (min) |
|---|---|---|---|---|---|---|
| HB Work | 19,631 | 7.6% | 32,786 | 10.9% | 1.7 | 25.4 |
| HB Post Sec | 10,464 | 4.1% | 14,567 | 4.8% | 1.4 | 19.4 |
| HB School | 83,684 | 32.5% | 77,160 | 25.6% | 0.9 | 13.5 |
| HB Shopping | 21,443 | 8.3% | 29,485 | 9.8% | 1.4 | 14.3 |
| HB Soc/Rec | 21,995 | 8.5% | 34,994 | 11.6% | 1.6 | 16.6 |
| HB Other | 38,406 | 14.9% | 51,166 | 17.0% | 1.3 | 15.6 |
| NHB Work | 11,506 | 4.5% | 10,931 | 3.6% | 0.9 | 11.7 |
| NHB Other | 50,660 | 19.7% | 50,477 | 16.7% | 1.0 | 12.0 |
| TOTAL | 257,789 | 100.0% | 301,565 | 100.0% | 1.2 | 14.9 |

The total distance traveled by pedestrians in Edmonton for trips greater than 100 metres is estimated to be 300,000 kilometres each day, with an average trip length of 1.2 kilometres per trip.  School trips are amongst the shortest trips, averaging around 900 metres while work trips are the longest at about 1.7 kilometres.

The average walk time is around 15 minutes with work trips having the longest travel time (25 minutes) while school and non-home based work trips (i.e. returning to work from lunch) being the shortest at around 12 minutes.

*Figure 3.55 - Average Walk  Length and Travel Time by Trip Purpose - City of Edmonton*
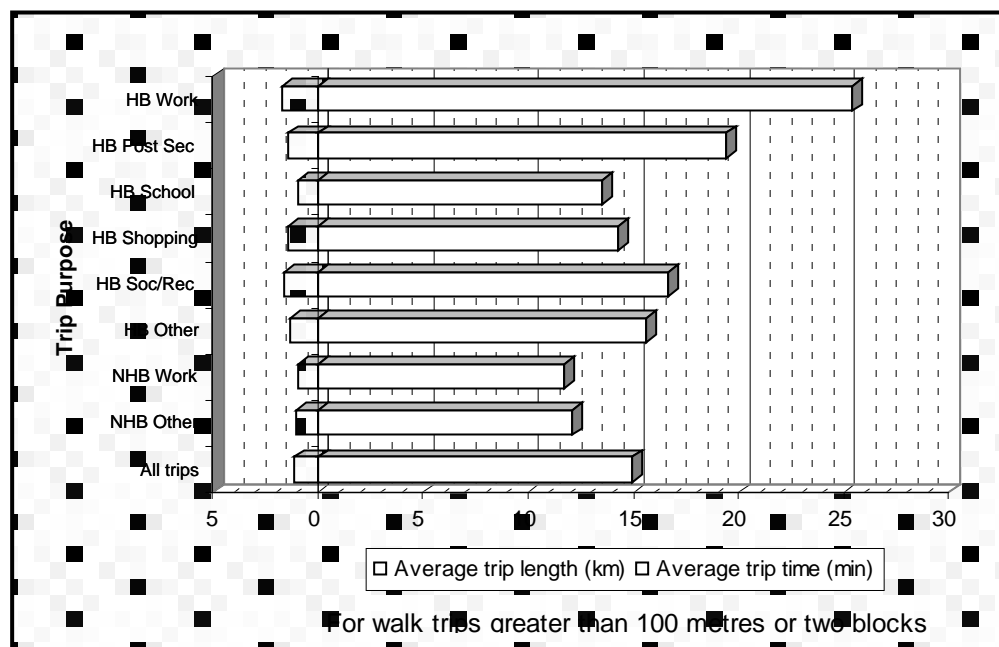
### 3.7.4 Alternate Travel Choice (City of Edmonton residents)

Roughly one-third of the pedestrians would choose to ride as a passenger in a car if they could not walk to their destination. 15% indicated that they would drive their car while 11% would take public transit.

*Table 3.27 - Alternate Travel Choice for Walk Trips*

| Alternate mode | Walk trips | % |
|---|---|---|
| No response | 6,637 | 2.6% |
| Auto driver | 38,671 | 15.0% |
| Auto passenger | 83,052 | 32.2% |
| Transit | 28,714 | 11.1% |
| School/private bus | 1,133 | 0.4% |
| Walk using alternate route | 17,998 | 7.0% |
| Bicycle | 16,573 | 6.4% |
| Other | 5,357 | 2.1% |
| Would not make trip | 59,654 | 23.1% |
| TOTAL | 257,789 | 100.0% |

Approximately 23% of the walk trips would not be made if the person could not walk to their destination.

It is interesting to note that 7% of the pedestrians could not choose another mode, indicating that they would walk to their destination, perhaps using an alternate route.

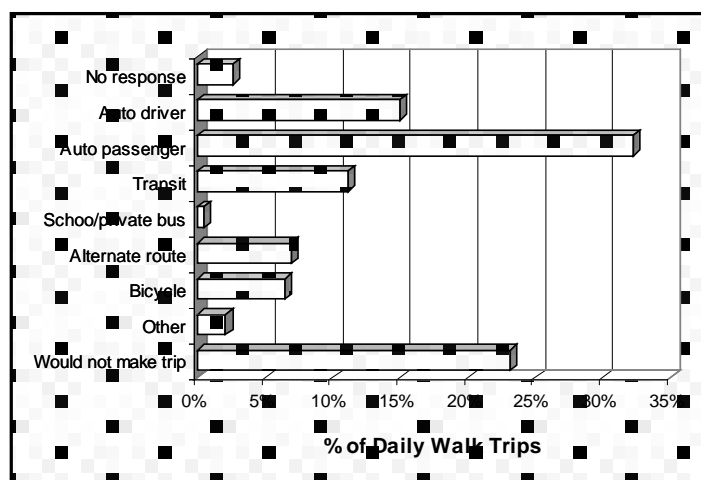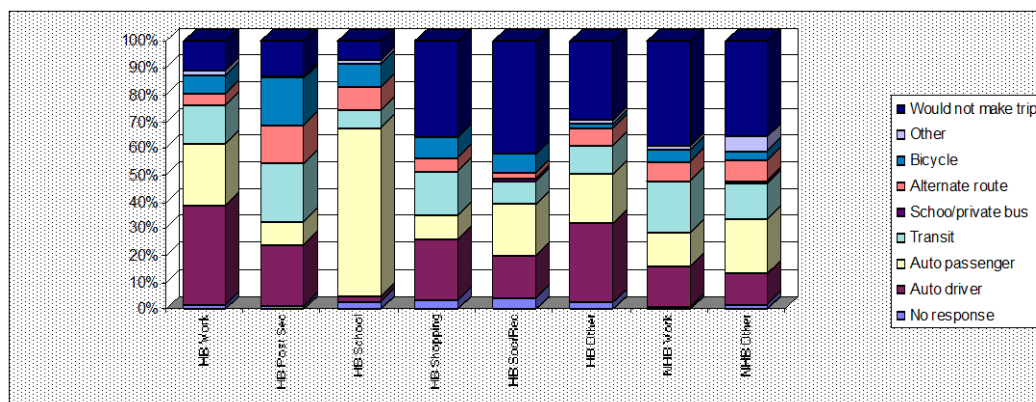*Figure 3.56 - Alternate Mode Choice for Walk Trips*



*Figure 3.57 - Alternate Mode Choice by Trip Purpose for Walk Trips*

# 4. Trip Origins and Destinations

The origins and destinations of the daily trips which are generated by households in the Edmonton CMA are described in this section.  To more easily present the spatial distribution of daily trips, the study area was divided into 17 regional zones, as illustrated in Figure 4.1.

The City of Edmonton is defined by Zones 1 through 13.  Sherwood Park and St. Albert make up zones 14 and 15 respectively while Zones 16 and 17 define the remainder of the CMA.  Zone 16 comprises the urban areas and Zone 17 comprises the rural areas within Strathcona County, the M.D. of Sturgeon, and the Counties of Parkland and Leduc.

*Figure 4.1 - Study Area Regional Zones*
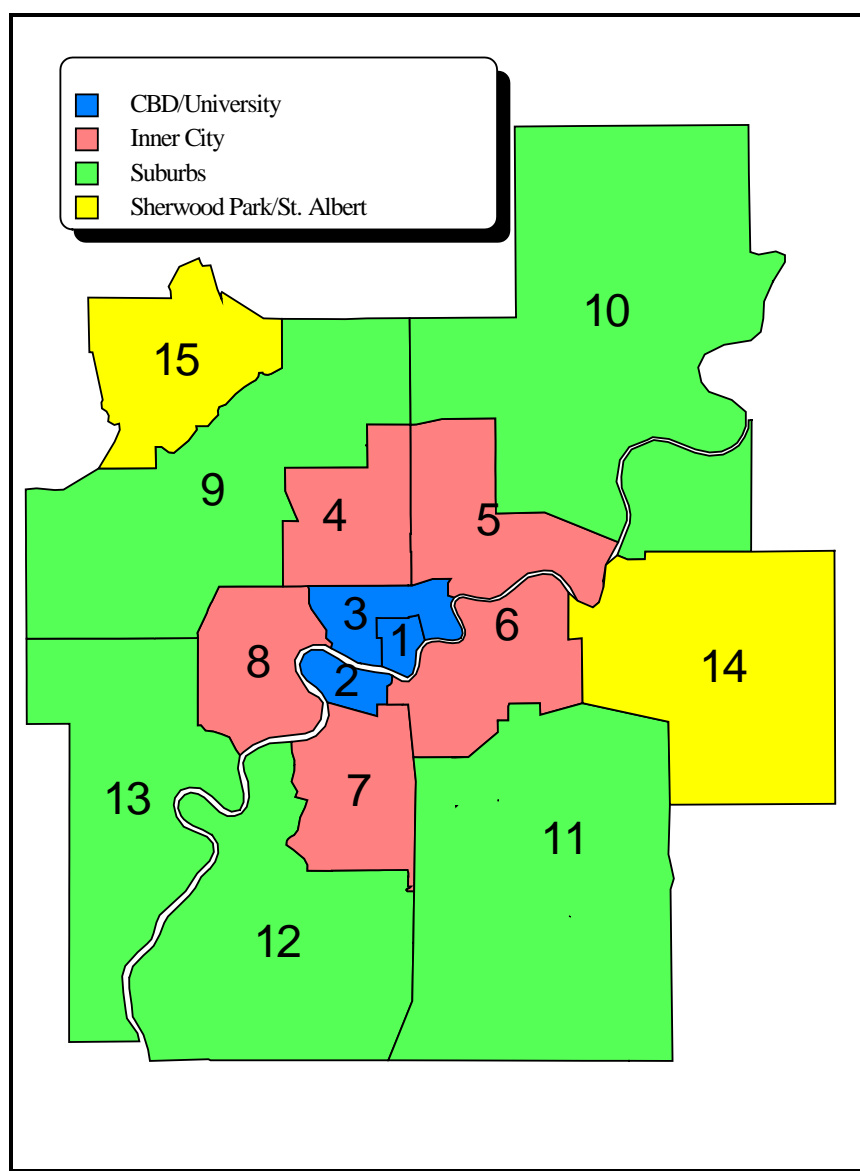
The origins and destinations of the daily person trips are presented for each of the major travel modes and trip purposes.  The travel modes include: all modes, auto driver, auto passenger, transit and walk.  Daily travel by these four modes make up nearly 98% of all trips in the Edmonton CMA.  The remaining 2% of daily travel are made using school or private bus, bicycle and other modes.

The trip purposes include: all trip purposes, home-based work, home-based post-secondary, home-based school, home-based shopping, home-based social/recreation, home-based other, non home-based work and non home-based other trips.  The origins and destinations of trips are also presented for the major travel modes within each trip purpose.

The spatial distribution of all daily trips by mode and purpose are presented in the following 27 tables.  Each table presents the daily trip origins and trip destinations to, from and within each of the 17 regional zones.  A graph is included with each table which illustrates the percentage of the total CMA trips which have either an origin or a destination within each zone.

The first column of each table lists the origin zone while the first row shows the destination zone.  To determine the number of trips with an origin in the CBD (Zone 1) and a destination in St. Albert, find the CBD in the origin zone column and follow the row until the St. Albert column (Zone 15) is reached.  In Table 4.1, the value is 4,450 daily trips.

The row totals show the total number of daily trips which originate in each zone while the column totals show the total daily trips with a destination in each zone.  As daily trips are presented, the total origins and destinations for each zone are nearly identical.

As well, each table summarizes the daily trips in terms of four major zone groupings.  The first group summarizes trips with an origin or a destination within the City of Edmonton and shows the distribution of these trips between the inner city (Zones 1 to 8) and the suburbs (Zones 9 to 13).  For example, in Table 4.1, 14% of the daily person trips have an origin in the inner city and a destination in the suburbs.

The second group summarizes the distribution of daily trips between the City of Edmonton and the Edmonton Region.  As shown in Table 4.1, 73% of the total daily trips have both an origin and a destination in the City.  The third group totals the trips which have a trip origin or destination in either the City of Edmonton or the Edmonton Region.  The fourth group shows the number of daily trips in the City and in the Region which are intra-zonal (the trip has both an origin and a destination in the zone) and which are inter-zonal (the trip has either an origin or destination in the zone).  For example, in Table 4.1, 63% of the daily person trips with an origin in the City of Edmonton traveled outside of their origin zone.

For the trip purposes where the auto driver and transit trip modes are also presented, tables are included which show the share of the total person trips which used that mode between each origin and destination pair.  For example, the transit mode share of all daily person trips for all trip purposes is presented in Table 4.6.  As indicated in this table, person trips with an origin or destination to/from the University area (Zone 2) have a high percentage of transit use.  Approximately 52% of all daily person trips with an origin in the University area and a destination in the CBD use transit.

*Table 4.1 - Daily Person Trips - All Purposes*

*Table 4.2 - Daily Auto Driver Trips - All Purposes*

*Table 4.3 - Daily Auto Passenger Trips - All Purposes*

*Table 4.4 - Daily Transit Trips - All Purposes*

*Table 4.5 - Daily Walk Trips - All Purposes*

*Table 4.6 - Transit Mode Share of all Daily Person Trips - All Purposes*

*Table 4.7 - Auto Driver Mode Share of all Daily Person Trips - All Purposes*

*Table 4.8 - Daily Person Trips - Home-based Work Trip Purpose*

*Table 4.9 - Daily Auto Driver Trips - Home-based Work Trip Purpose*

*Table 4.10 - Daily Auto Passenger Trips - Home-based Work Trip Purpose*

*Table 4.11 - Daily Transit Trips - Home-based Work Trip Purpose*

*Table 4.12 - Transit Mode Share of all Daily Person Trips - - Home-based Work Trip Purpose*

*Table 4.13 - Auto Driver Mode Share of all Daily Person Trips - - Home-based Work Trip Purpose*

*Table 4.14 - Daily Person Trips - Home-based Post Secondary Trip Purpose*

*Table 4.15 - Daily Person Trips - Home-based School Trip Purpose*

*Table 4.16 - Daily Auto Passenger Trips - Home-based School Trip Purpose*

*Table 4.17 - Daily Transit Trips - Home-based School Trip Purpose*

*Table 4.18 - Transit Mode Share of all Daily Person Trips - - Home-based School Trip Purpose*

*Table 4.19 - Daily Person Trips - Home-based Shopping Trip Purpose*

*Table 4.20 - Daily Person Trips - Home-based Social/Recreation Trip Purpose*

*Table 4.21 - Daily Person Trips - Home-based Other Trip Purpose*

*Table 4.22 - Daily Auto Driver Trips - Home-based Other Trip Purpose*

*Table 4.23 - Auto Driver Mode Share of all Daily Person Trips - - Home-based Other Trip Purpose*

*Table 4.24 - Daily Person Trips - Non Home-based Work Trip Purpose*

*Table 4.25 - Daily Person Trips - Non Home-based Other Trip Purpose*

*Table 4.26 - Daily Auto Driver Trips - Non Home-based Other Trip Purpose*

*Table 4.27 - Auto Driver Mode Share of all Daily Person Trips - - Non Home-based Other Trip Purpose*

The following figures present the major daily trip origins and destinations in the form of travel desire maps. Each map illustrates the major trip movements between the thirteen City zones as well as to St. Albert and Sherwood Park. Travel desire maps are presented for the following modes and trip purposes:

1. *Daily Person Trips - All Trip Purposes*
2. *Daily Auto Driver Trips - All Trip Purposes*
3. *Daily Transit Trips - All Trip Purposes*
4. *Daily Person Trips - Home Based Work Trip Purpose*
5. *Daily Auto Driver Trips - Home Based Work Trip Purpose*
6. *Daily Transit Trips - Home Based Work Trip Purpose*

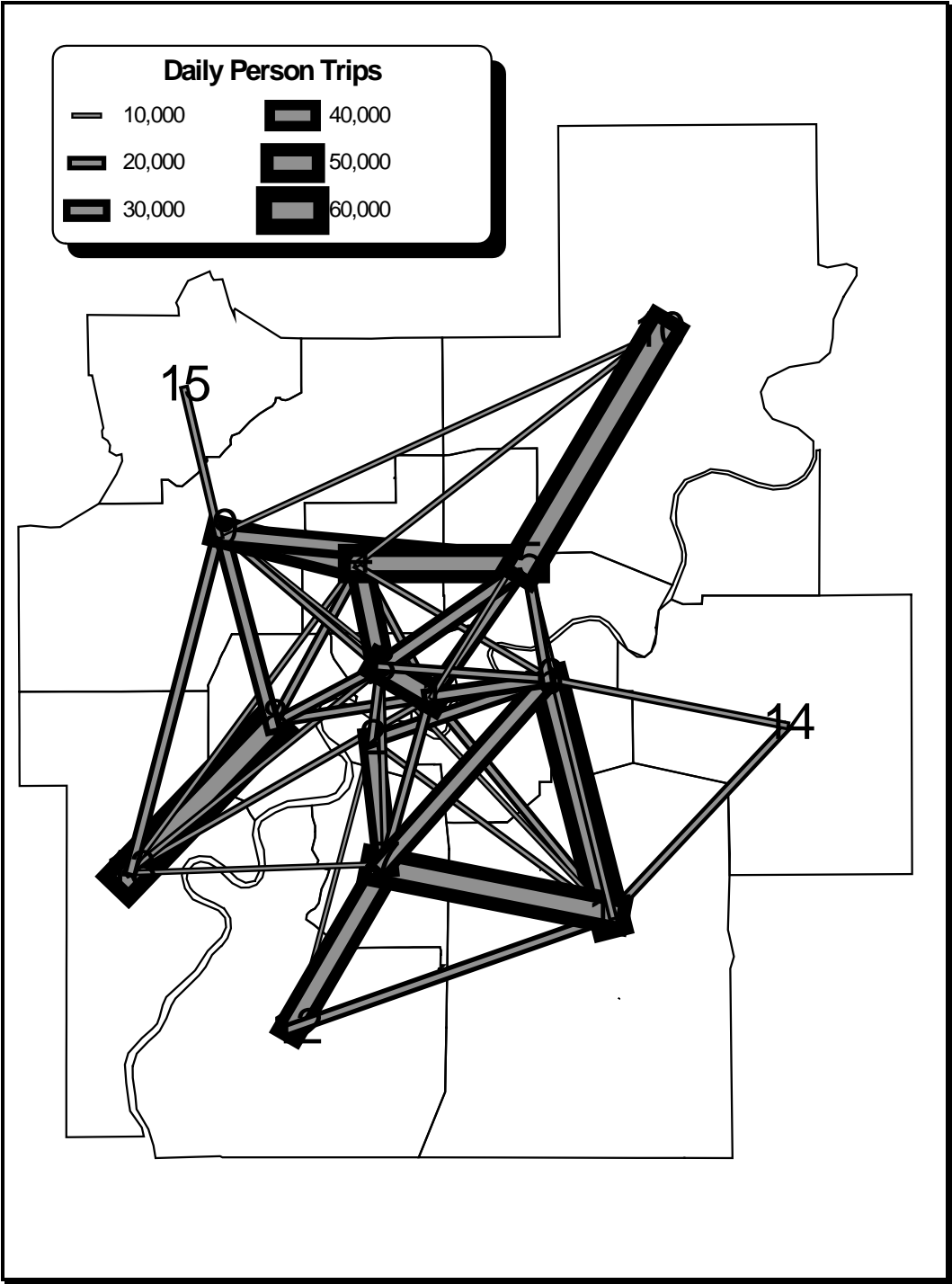*Figure 4.2 - Daily Person Trips - All Trip Purposes*

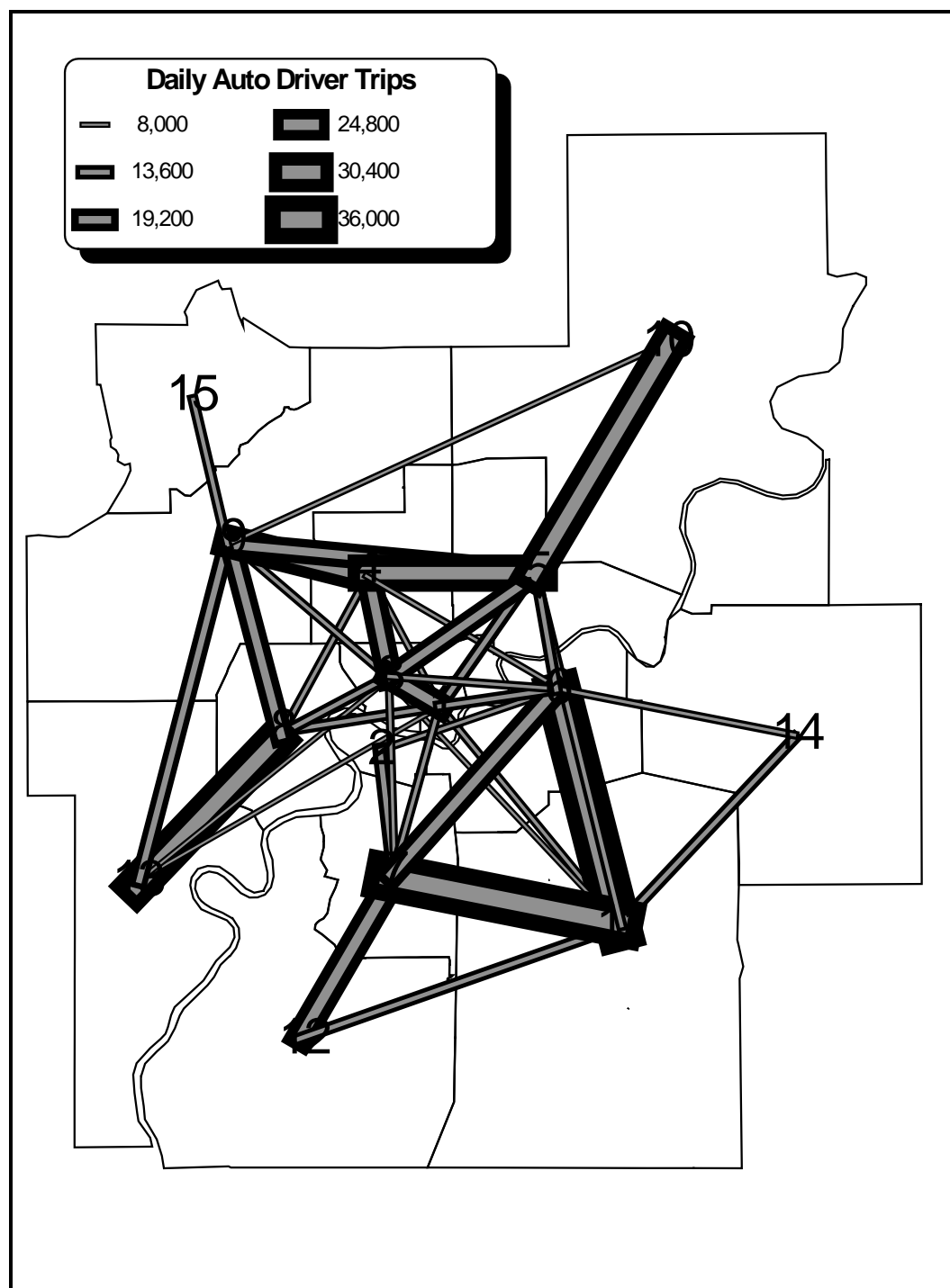*Figure 4.3 - Daily Auto Driver Trips - All Trip Purposes*
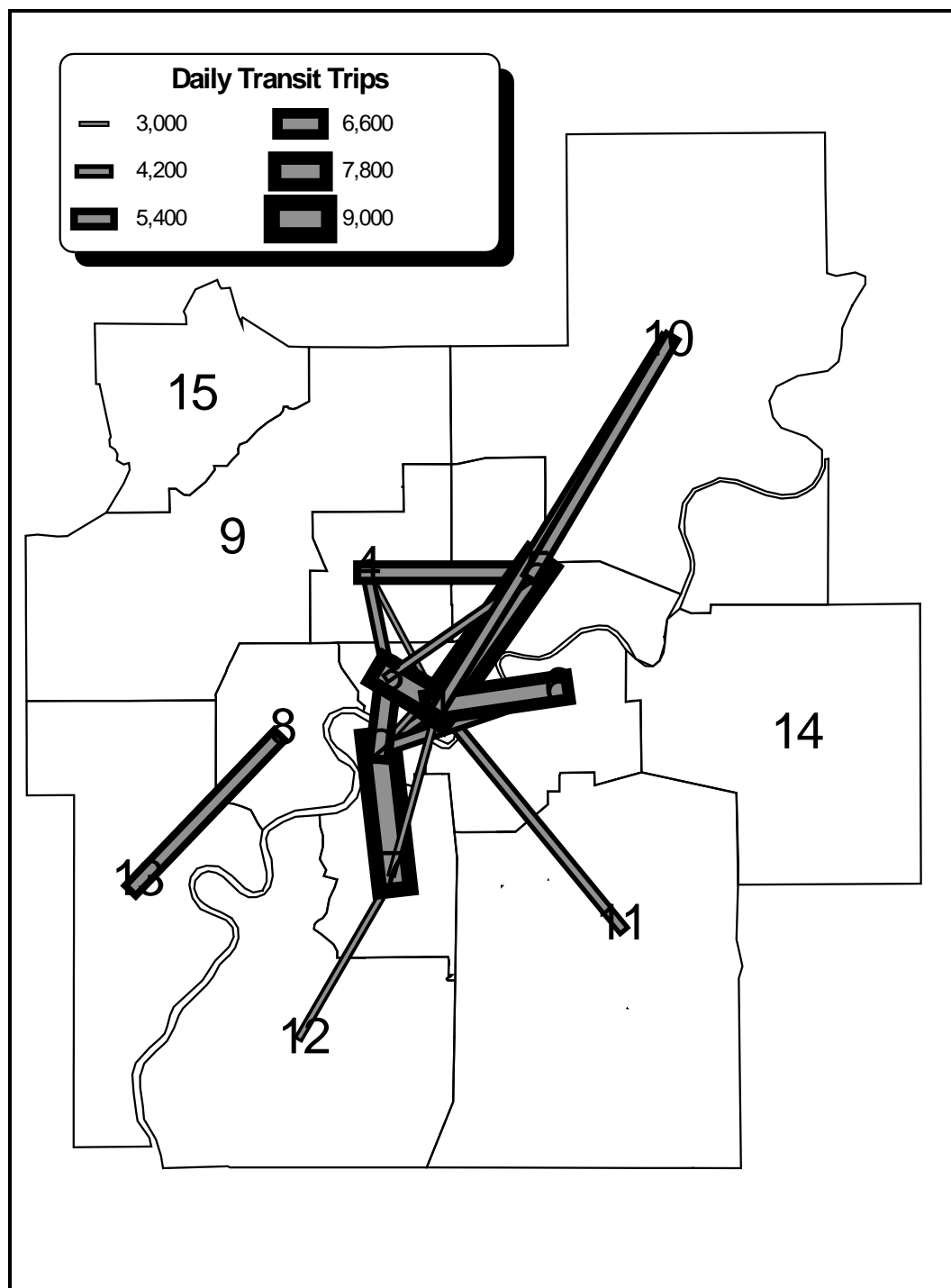
*Figure 4.4 - Daily Transit Trips - All Trip Purposes*

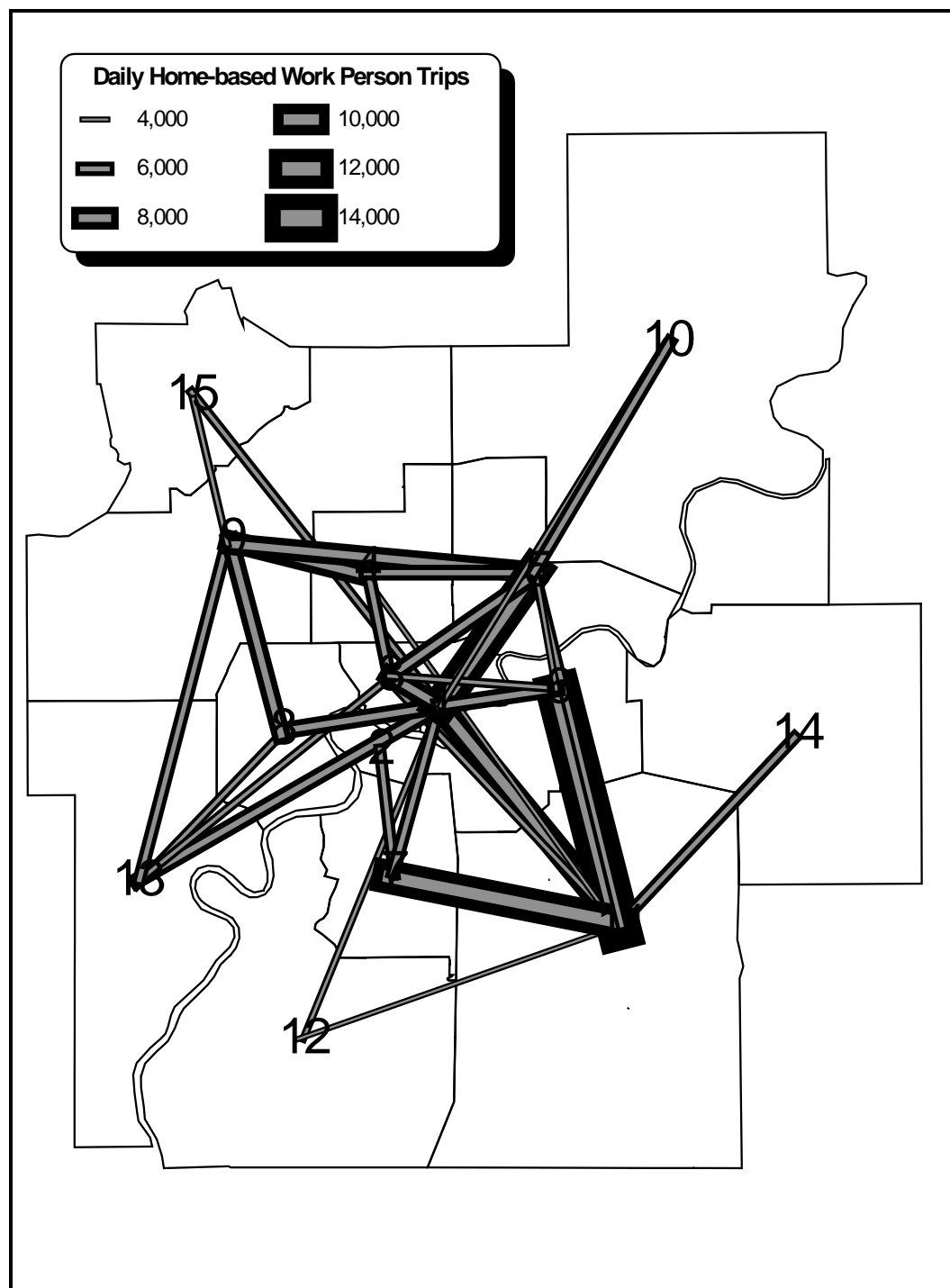*Figure 4.5 - Daily Home-based Work Person Trips*

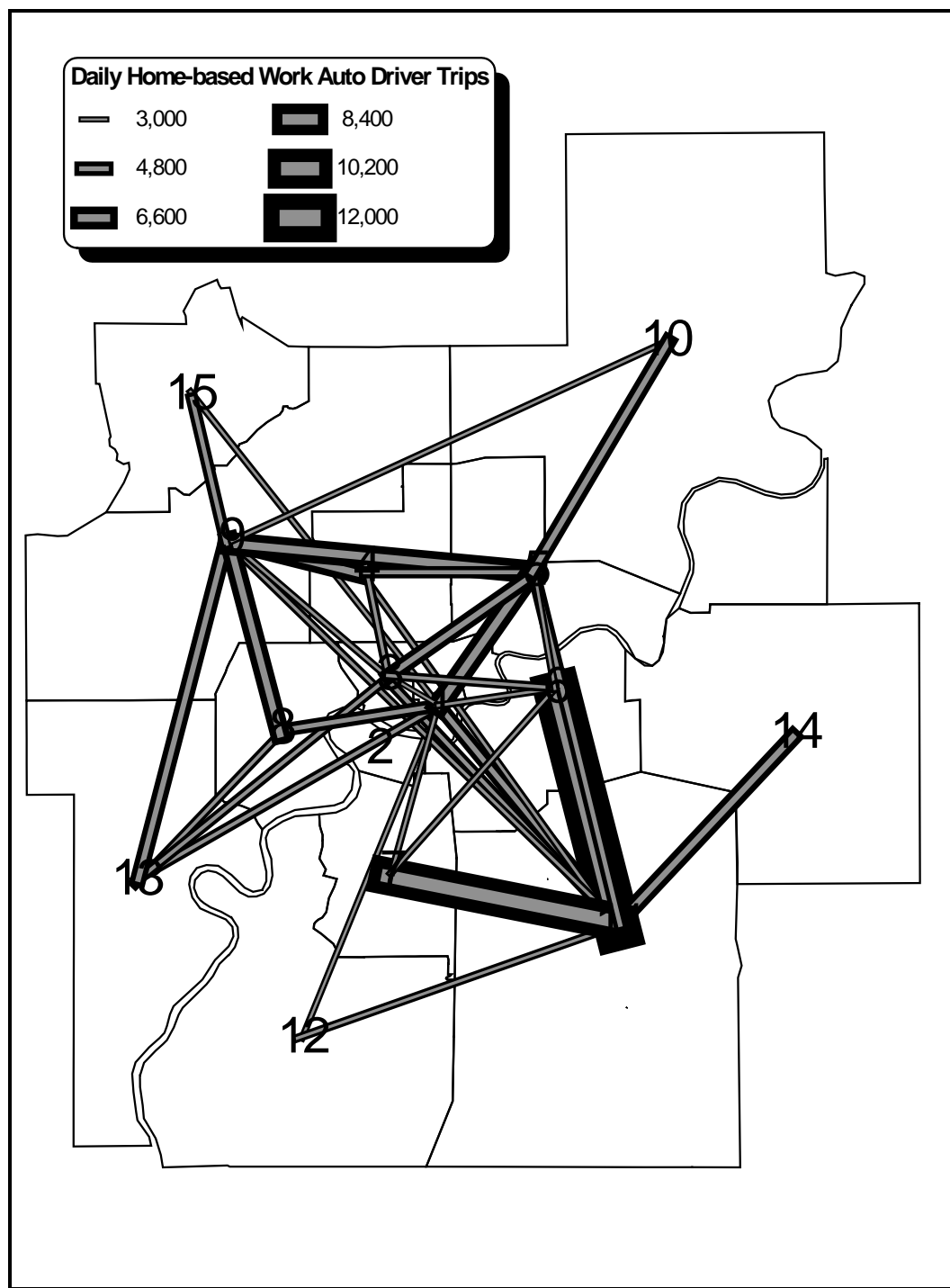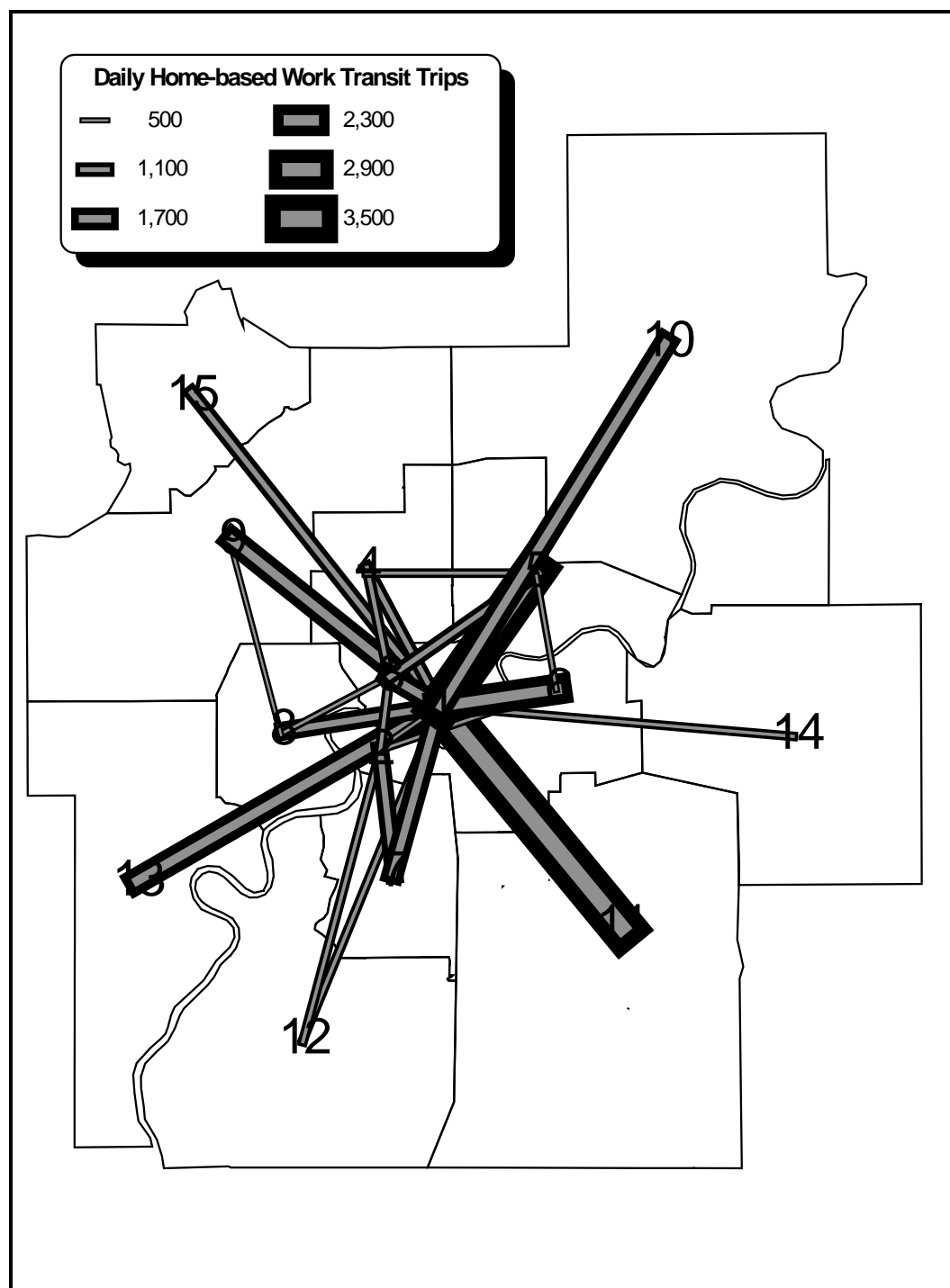*Figure 4.6 - Daily Home-based Work Auto Driver Trips*

*Figure 4.7 - Daily Home-based Work Transit Trips*

# 5. Special Focus Areas

Two geographic areas in the City of Edmonton have been selected for a more detailed analysis of trip characteristics and patterns. These two areas are the Central Business District and the University area and are represented respectively by Zones 1 and 2 in Figure 4.1.

## 5.1 Central Business District (CBD)

The Central Business District (CBD) of the City of Edmonton has the highest concentration of employment in the City. Nearly one out of every five employees who live in the City work in the CBD.

*Table 5.1 - CBD Demographics*

|  |  | % of City of Edmonton |
|---|---|---|
| Households | 4,250 | 1.7% |
| Population | 6,160 | 1.0% |
| Persons per household | 1.45 | |
| Employed Labour Force (1) | 3,550 | 1.2% |
| Employment in the CBD (2) | 62,310 | 19.0% |
| Ratio of (2) / (1) | 17.6 | |

The population of the CBD however is relatively small. Just over 6,100 people live in the area, which represents less than 2% of the population of the City of Edmonton. The average household size is 1.45 persons per household, which is considerably less than the City-wide average of 2.56 persons per household.

*Table 5.2 - Daily Person Trips with an Origin or Destination in the CBD by Trip Purpose*

| Trip Purpose | Daily Person Trips | % |
|---|---|---|
| Home-based Work | 85,570 | 30% |
| Home-based Post Secondary | 8,580 | 3% |
| Home-based School | 765 | 0% |
| Home-based Shopping | 14,770 | 5% |
| Home-based Social/Recreation | 13,960 | 5% |
| Home-based Other | 42,915 | 15% |
| *Home-based Sub-total* | 166,560 | 58% |
| Non home-based-Work | 28,970 | 10% |
| Non home-based Other | 89,690 | 31% |
| *Non home-based Sub-total* | 118,660 | 42% |
| TOTAL | 285,220 | 100% |

Nearly one out every three daily person trips in the CBD are made between home and the workplace. Non home-based other trips constitute the majority of the CBD trips, and are made for such purposes as to go shopping after work or to go to lunch or run errands during the day. Only 5% of all trips to the CBD are made from home to go shopping.

*Table 5.3 - Travel Mode Split by Zone for Daily Person Trips with an Origin or Destination in the CBD*

| Origin / Destination of CBD Trips | Auto Driver | Auto Passenger | Transit | Other | TOTAL | % of CMA | Auto Driver | Auto Passenger | Transit | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 CBD | 6,510 | 2,030 | 2,940 | 31,590 | 43,070 | 15% | 15% | 5% | 7% | 73% |
| 2 University | 3,060 | 980 | 4,000 | 1,140 | 9,180 | 3% | 33% | 11% | 44% | 12% |
| 3 CBD Fringe | 22,050 | 5,990 | 8,100 | 8,770 | 44,910 | 16% | 49% | 13% | 18% | 20% |
| 4 NW-Inner | 9,220 | 2,280 | 3,280 | 230 | 15,010 | 5% | 61% | 15% | 22% | 2% |
| 5 NE-Inner | 13,360 | 3,240 | 8,610 | 690 | 25,900 | 9% | 52% | 13% | 33% | 3% |
| 6 SE-Inner | 12,070 | 3,970 | 7,360 | 990 | 24,390 | 9% | 49% | 16% | 30% | 4% |
| 7 SW-Inner | 10,690 | 3,060 | 3,530 | 350 | 17,630 | 6% | 61% | 17% | 20% | 2% |
| 8 West-Inner | 11,780 | 2,610 | 2,980 | 870 | 18,240 | 6% | 65% | 14% | 16% | 5% |
| 9 NW-Suburb | 6,830 | 1,100 | 2,310 | 80 | 10,320 | 4% | 66% | 11% | 22% | 1% |
| 10 NE-Suburb | 4,740 | 1,580 | 4,830 | 20 | 11,170 | 4% | 42% | 14% | 43% | 0% |
| 11 SE-Suburb | 10,180 | 2,710 | 4,240 | 0 | 17,130 | 6% | 59% | 16% | 25% | 0% |
| 12 SW-Suburb | 6,180 | 1,240 | 1,090 | 10 | 8,520 | 3% | 73% | 15% | 13% | 0% |
| 13 West-Suburb | 8,010 | 2,490 | 2,600 | 40 | 13,140 | 5% | 61% | 19% | 20% | 0% |
| Total City | 124,680 | 33,280 | 55,870 | 44,780 | 258,610 | 91% | 48% | 13% | 22% | 17% |
| 14 Sherwood Pk. | 4,180 | 890 | 1,370 | 0 | 6,440 | 2% | 65% | 14% | 21% | 0% |
| 15 St. Albert | 5,720 | 2,180 | 1,520 | 40 | 9,460 | 3% | 60% | 23% | 16% | 0% |
| 16 Region-Urban | 3,540 | 970 | 0 | 200 | 4,710 | 2% | 75% | 21% | 0% | 4% |
| 17 Region-Other | 4,730 | 910 | 0 | 360 | 6,000 | 2% | 79% | 15% | 0% | 6% |
| Total Region | 18,170 | 4,950 | 2,890 | 600 | 26,610 | 9% | 68% | 19% | 11% | 2% |
| Total CMA | 142,850 | 38,230 | 58,760 | 45,380 | 285,220 | 100% | 50% | 13% | 21% | 16% |

*Figure 5.1 - Travel Mode Split by Zone for Daily Person Trips with an Origin or Destination in the CBD*
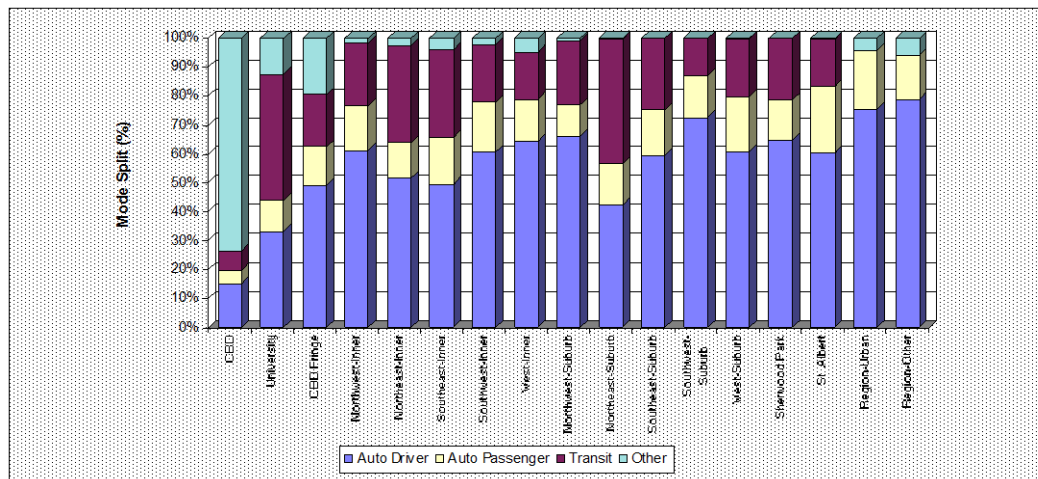


The following figures illustrate the major travel desire lines between the CBD and the remainder of the City. Travel desire maps are presented for three modes: daily person trips, daily auto driver trips, and daily transit trips.

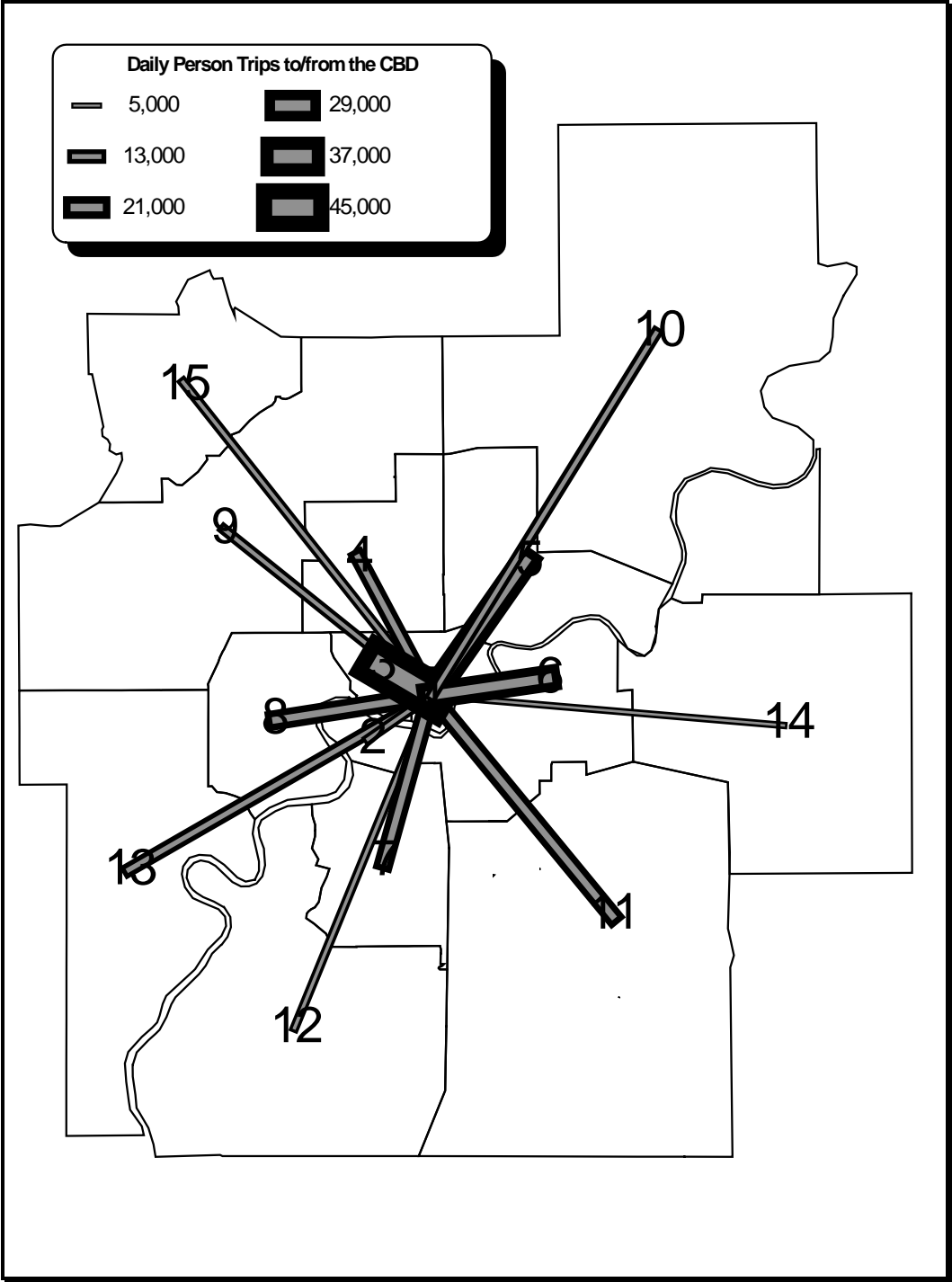*Figure 5.2 - Daily Person Trips with an Origin or Destination in the CBD*

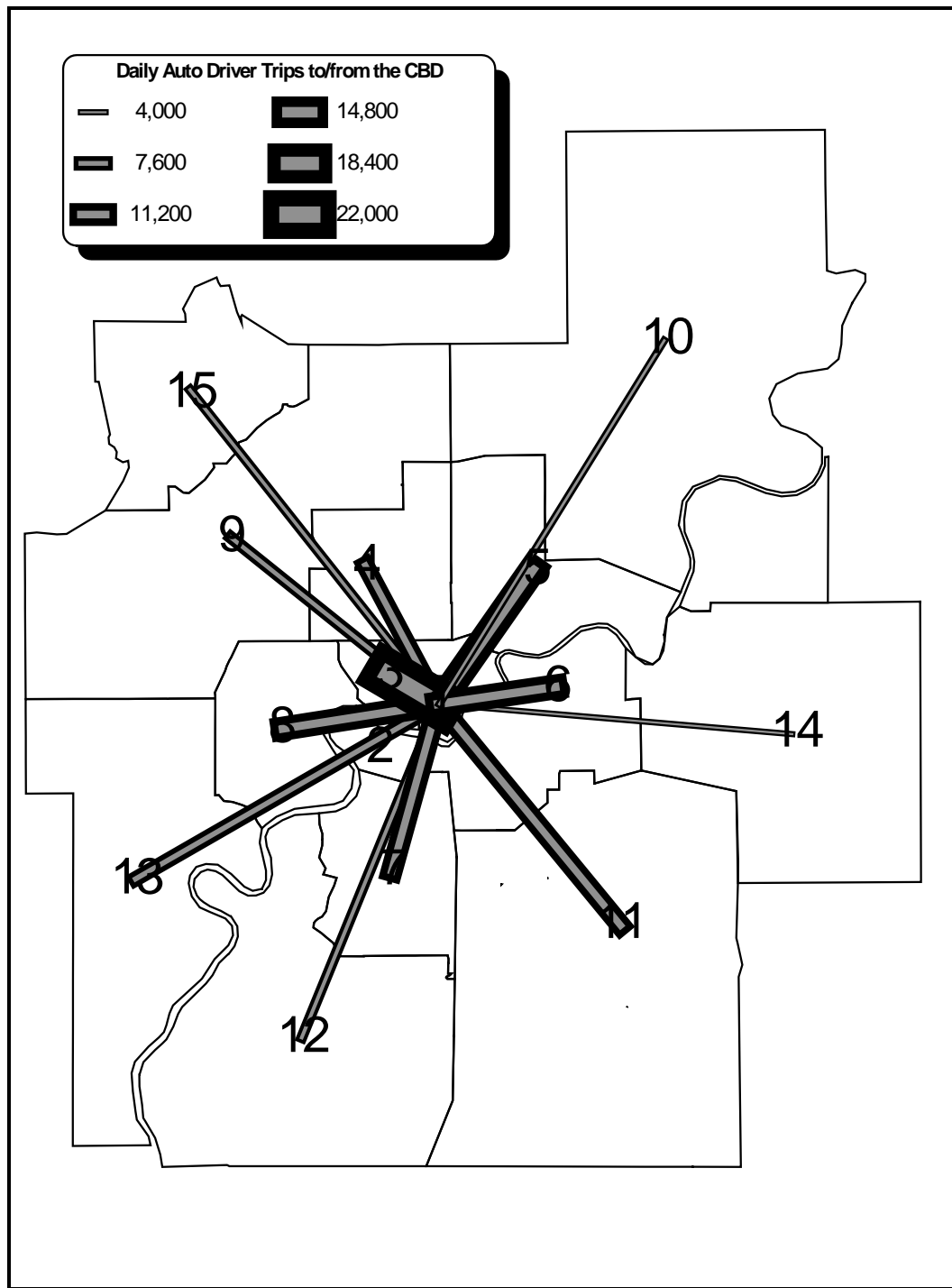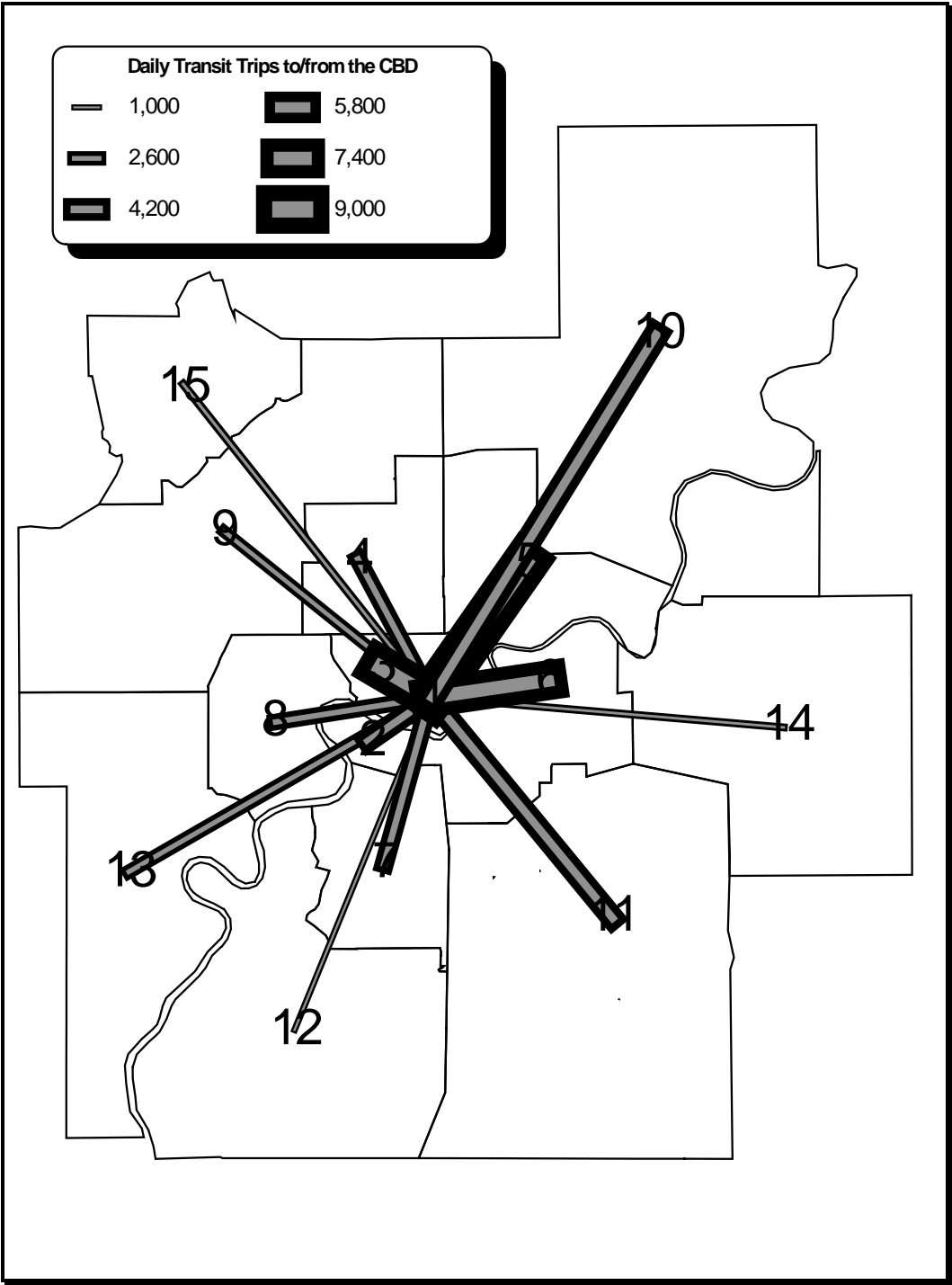*Figure 5.3 - Daily Auto Driver Trips with an Origin or Destination in the CBD*

*Figure 5.4 - Daily Transit Trips with an Origin or Destination in the CBD*

## 5.2 University Area

The University area has a relatively high number of employees as well as the highest number of post-secondary students in the City. As indicated in Table 4.14, nearly one out of every three post-secondary trips in an average weekday are made to or from the University area.

*Table 5.4 - University Area Demographics*

|  |  | % of City of Edmonton |
|---|---|---|
| Households | 4,360 | 1.8% |
| Population | 7,850 | 1.2% |
| Persons per household | 1.80 |  |
| Employed Labour Force (1) | 3,610 | 1.2% |
| Employment in the CBD (2) | 20,500 | 6.3% |
| Ratio of (2) / (1) | 5.7 |  |

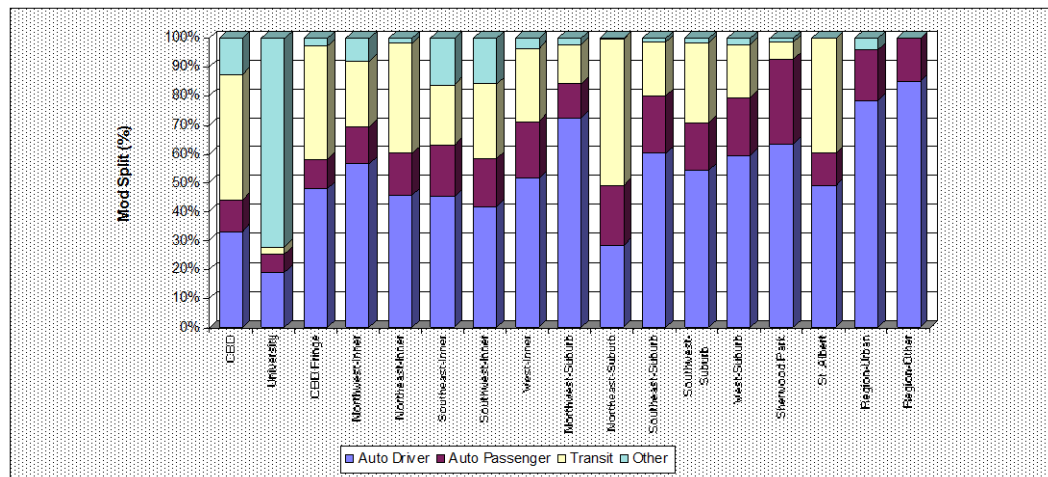*Table 5.5 - Daily Person Trips with an Origin or Destination in the University Area by Trip Purpose*

| Trip Purpose | Daily Person Trips | % |
|---|---|---|
| Home-based Work | 30,420 | 18% |
| Home-based Post Secondary | 45,760 | 27% |
| Home-based School | 1,230 | 1% |
| Home-based Shopping | 5,920 | 3% |
| Home-based Social/Recreation | 14,180 | 8% |
| Home-based Other | 27,440 | 16% |
| *Home-based Sub-total* | 124,950 | 72% |
| Non home-based-Work | 5,080 | 3% |
| Non home-based Other | 42,570 | 25% |
| *Non home-based Sub-total* | 47,650 | 28% |
| TOTAL | 172,600 | 100% |

The majority of daily trips made to the University area are either to go to work (18%) or to attend class (27%). Non home based trips account for 28% of all person trips to the University area.

*Table 5.6 - Travel Mode Split by Zone for Daily Person Trips with an Origin or Destination in the University Area*

| Origin / Destination of University Trips | Auto Driver | Auto Passen-ger | Transit | Other | TOTAL | % of CMA | Auto Driver | Auto Passen-ger | Transit | Other |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 CBD | 3,060 | 980 | 4,000 | 1,140 | 9,180 | 5% | 33% | 11% | 44% | 12% |
| 2 University | 3,170 | 1,060 | 410 | 11,990 | 16,630 | 10% | 19% | 6% | 2% | 72% |
| 3 CBD Fringe | 7,520 | 1,600 | 6,130 | 450 | 15,700 | 9% | 48% | 10% | 39% | 3% |
| 4 NW-Inner | 3,350 | 770 | 1,330 | 480 | 5,930 | 3% | 56% | 13% | 22% | 8% |
| 5 NE-Inner | 4,240 | 1,350 | 3,550 | 150 | 9,290 | 5% | 46% | 15% | 38% | 2% |
| 6 SE-Inner | 10,010 | 3,940 | 4,630 | 3,560 | 22,140 | 13% | 45% | 18% | 21% | 16% |
| 7 SW-Inner | 14,160 | 5,640 | 8,730 | 5,360 | 33,890 | 20% | 42% | 17% | 26% | 16% |
| 8 West-Inner | 4,160 | 1,570 | 2,060 | 270 | 8,060 | 5% | 52% | 19% | 26% | 3% |
| 9 NW-Suburb | 3,090 | 490 | 580 | 90 | 4,250 | 2% | 73% | 12% | 14% | 2% |
| 10 NE-Suburb | 1,030 | 750 | 1,830 | 10 | 3,620 | 2% | 28% | 21% | 51% | 0% |
| 11 SE-Suburb | 7,560 | 2,500 | 2,330 | 180 | 12,570 | 7% | 60% | 20% | 19% | 1% |
| 12 SW-Suburb | 5,520 | 1,680 | 2,800 | 180 | 10,180 | 6% | 54% | 17% | 28% | 2% |
| 13 West-Suburb | 4,670 | 1,560 | 1,450 | 170 | 7,850 | 5% | 59% | 20% | 18% | 2% |
| Total City | 71,540 | 23,890 | 39,830 | 24,030 | 159,290 | 92% | 45% | 15% | 25% | 15% |
| 14 Sherwood Pk. | 2,600 | 1,190 | 240 | 60 | 4,090 | 2% | 64% | 29% | 6% | 1% |
| 15 St. Albert | 1,770 | 400 | 1,440 | 0 | 3,610 | 2% | 49% | 11% | 40% | 0% |
| 16 Region-Urban | 2,240 | 500 | 0 | 120 | 2,860 | 2% | 78% | 17% | 0% | 4% |
| 17 Region-Other | 2,340 | 410 | 0 | 0 | 2,750 | 2% | 85% | 15% | 0% | 0% |
| Total Region | 8,950 | 2,500 | 1,680 | 180 | 13,310 | 8% | 67% | 19% | 13% | 1% |
| Total CMA | 80,490 | 26,390 | 41,510 | 24,210 | 172,600 | 100% | 47% | 15% | 24% | 14% |

*Figure 5.5 - Travel Mode Split by Zone for Daily Person Trips with an Origin or Destination in the University Area*



The following figures illustrate the major travel desire lines between the University area and the remainder of the City. Travel desire maps are presented for three modes: daily person trips, daily auto driver trips, and daily transit trips.

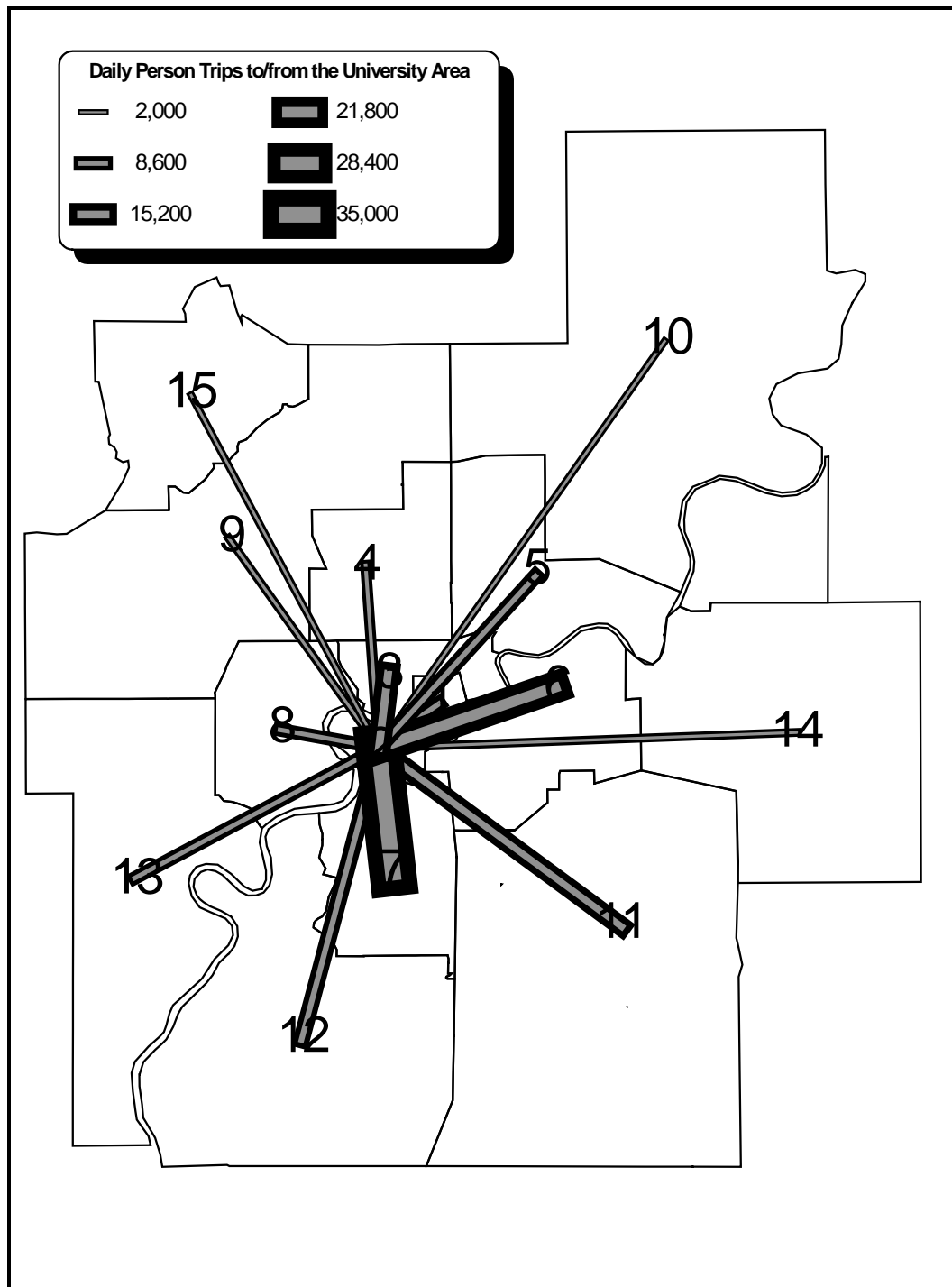*Figure 5.6 - Daily Person Trips with an Origin or Destination in the University Area*

*Figure 5.7 - Daily Auto Driver Trips with an Origin or Destination in the University Area*



**Daily Auto Driver Trips to/from the University Area**

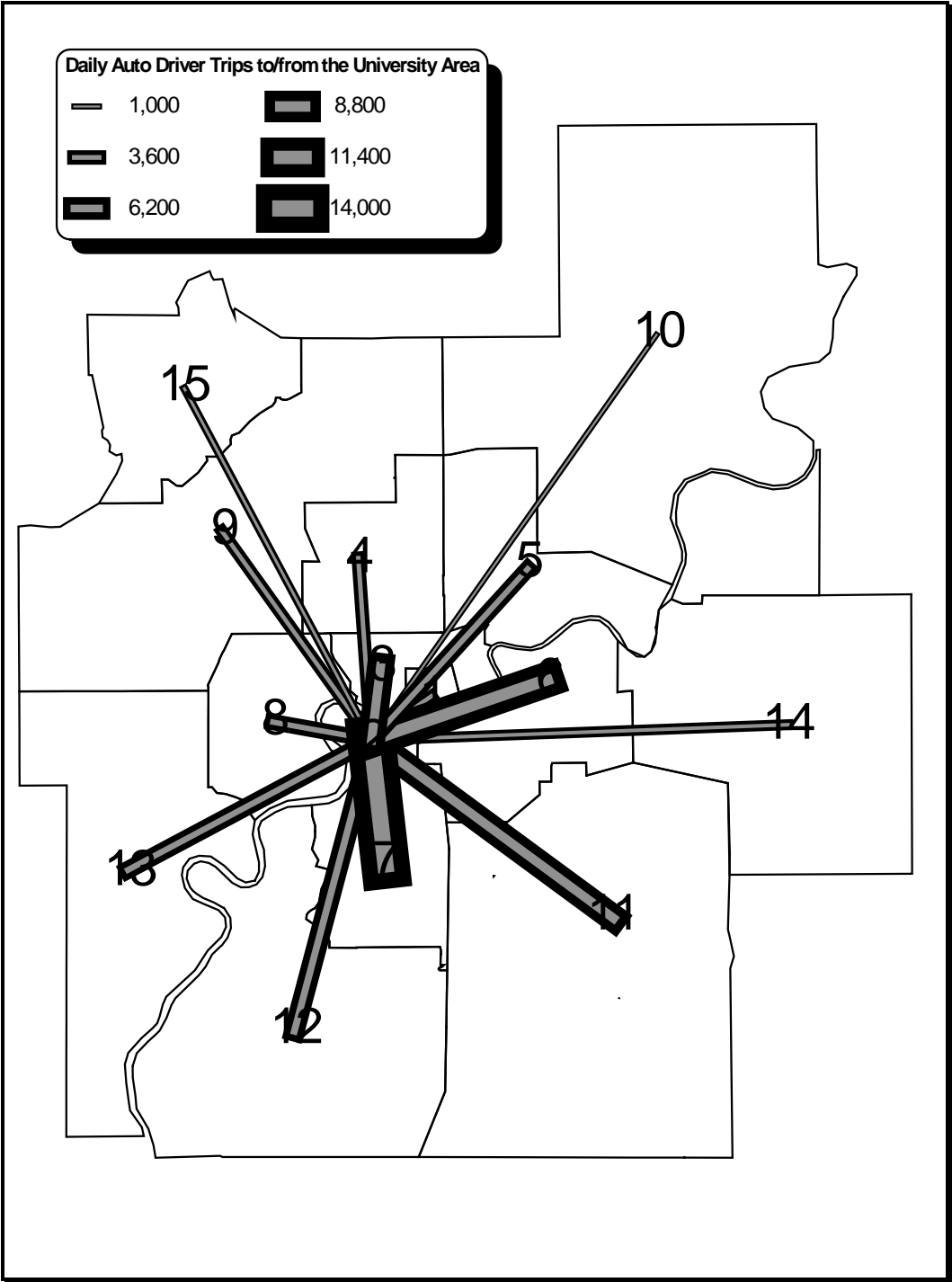| | | | |
|---|---|---|---|
| 1,000 | | 8,800 | |
| 3,600 | | 11,400 | |
| 6,200 | | 14,000 | |

*Figure 5.8 - Daily Transit Trips with an Origin or Destination in the University Area*