THE CITY OF
CALGARY
TRANSPORTATION PLANNING

Mobility Monitor

ISSUE #7 - JANUARY 2004

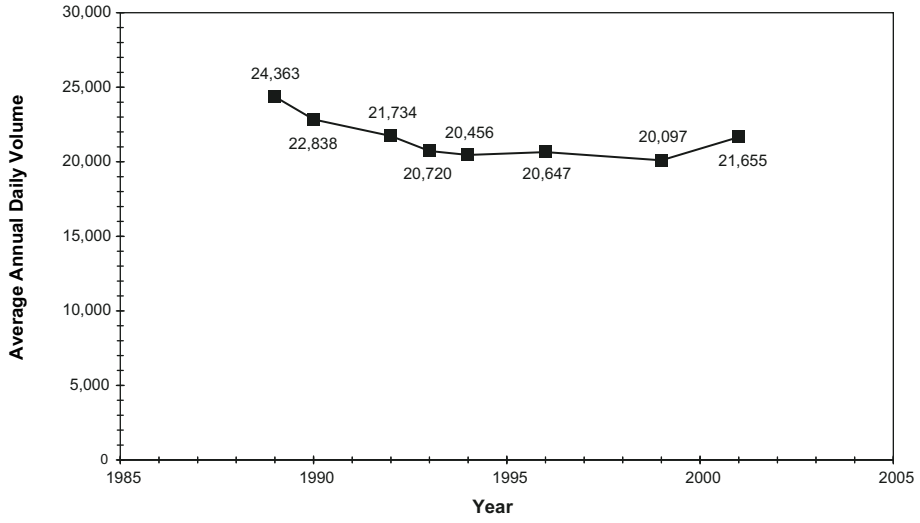
TRAFFIC PATTERNS AT THE SHAGANAPPI TRAIL PERMANENT TRAFFIC MONITORING STATION

The City of Calgary maintains 12 permanent traffic monitoring stations. One of these stations is located on Shaganappi Trail N.W. between 32 Avenue N.W. and 16 Avenue N.W. This *Mobility Monitor* presents some of the information that has been collected at this location. The traffic patterns are different at each of the permanent traffic monitoring stations.

KEY FINDING

Average annual daily traffic at the Shaganappi Trail Permanent Traffic Monitoring Station increased by 8% between 1999 and 2001, after a long period from 1993 to 1999 when there was little change in the traffic. The traffic volume in 2001 was lower than in 1989 or 1990.

Average Daily Traffic Volumes
at the Shaganappi Trail Permanent Traffic Monitoring Station

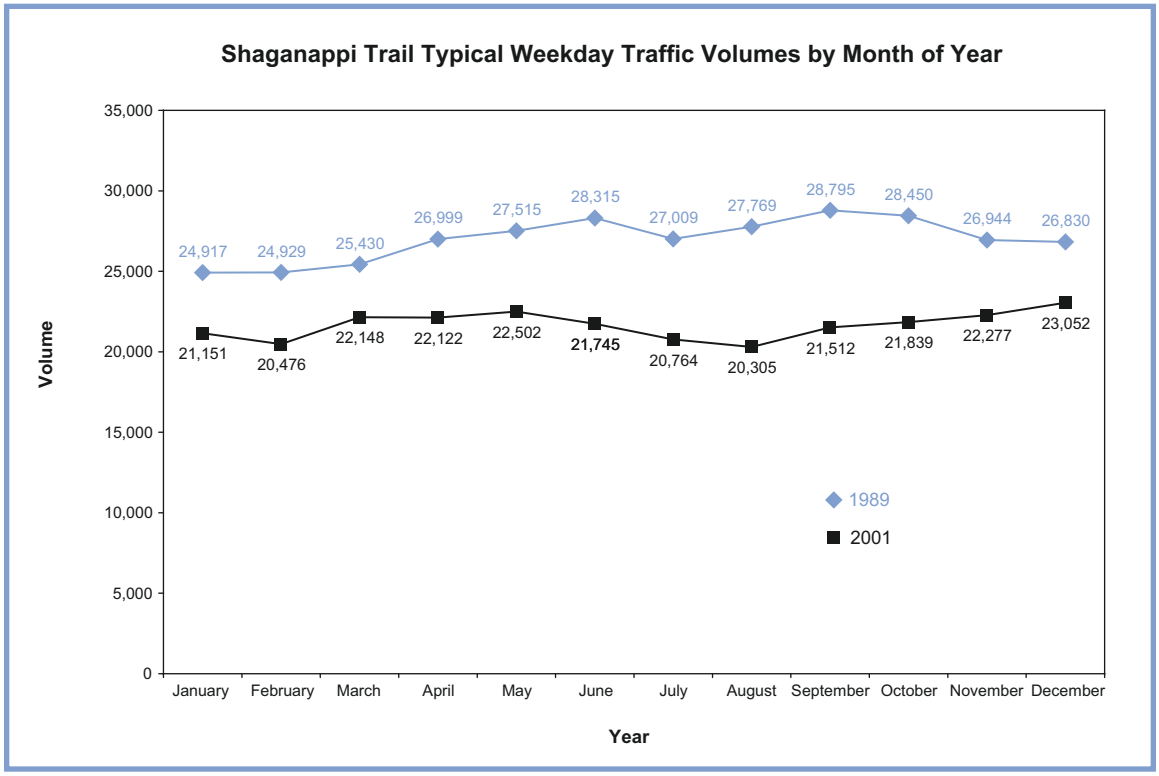


- The average annual daily traffic volume is calculated by dividing the total volume for the year by the number of days in the year.
- The volume of traffic on Shaganappi Trail declined by 15% between 1989 and 1993. The decrease may reflect the maturing of the adjacent communities, such as Varsity, which was showing decreases in population during this period. The increase in 2001 may reflect the opening of the Shaganappi Trail and Crowchild Trail interchange, and construction on Crowchild Trail.
- In 1989, the average annual daily traffic volume was 24,363 vehicles, but this varied from 8,311 vehicles on December 25 to 31,067 vehicles on October 13.
- In 2001, the average annual daily traffic volume was 21,655 vehicles, but this varied from 6,861 vehicles on December 25 to 26,412 vehicles on January 26.

The *Mobility Monitor* is produced by the Transportation Data Team to make the information the Team has gathered more accessible and to help the public become better informed. The Transportation Data Team is responsible for collecting information on travel for use in planning and operating the city's roads, transit, and pathways.

KEY FINDING

The seasonal pattern of traffic volumes on Shaganappi Trail changed between 1989 and 2001. For example, August was an above average month in 1989, but in 2001 it was the lowest month.



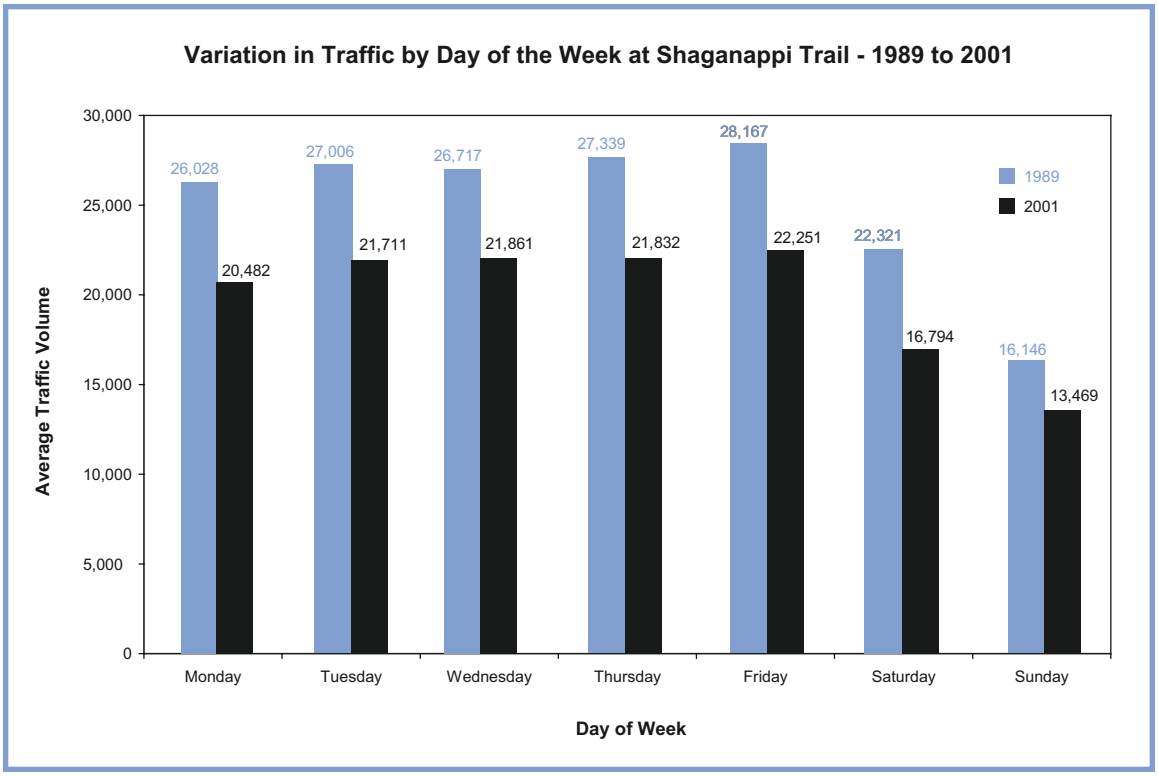
- The typical weekday traffic volume for each month was calculated by dividing the total traffic volume on typical weekdays in a month by the number of typical weekdays in the month. Saturdays, Sundays, statutory holidays and other unusual days, such as a Friday before a long weekend or a snow day were excluded.
- In 1989 the typical weekday traffic volume was 27,000 for the year, while in 2001 the typical weekday traffic volume had dropped by 20% to 21,700.
- The range of variation in traffic volumes has decreased very slightly from 1989 to 2001. The lowest month in 1989, January, was 8% less than average, while the lowest month in 2001, August, was 6% less than average. The highest month in 1989, September, was 7% higher than average, while the highest month in 2001, December, was 6% higher than average.

Sources of Information

The data in this Mobility Monitor comes from the permanent traffic monitoring station on Shaganappi Trail N.W. south of 32 Avenue NW. At permanent traffic monitoring stations information on traffic is collected 24 hours a day for every day of the year. From time to time the equipment may fail and some data may be missing for that year. In this report only years where data was available for every day of the year were used.

KEY FINDING

The average traffic volume on Saturday is about 80% of the typical weekday volume. The average traffic volume on Sunday is about 60% of the typical weekday volume.



- The average traffic volume for each day of the week was calculated by dividing the total traffic volume on each day of the week for the entire year by the number of days of the week for the year. Statutory holidays and other unusual days, such as a Friday before a long weekend or a snow day were excluded from the calculation.
- In both 1989 and 2001 the highest traffic volume is on Friday, which had 104% of the typical weekday traffic volume in 1989 and 103% in 2001. Monday had the lowest traffic volume for a weekday, with 96% of the typical weekday volume in 1989 and 95% in 2001.
- Saturdays and Sundays had much lower volumes than the weekdays. The traffic volumes on Saturday were 83% of the typical weekday traffic volume in 1989 and 78% in 2001. The traffic volumes on Sunday were 60% of the typical weekday traffic volume in 1989 and 62% in 2001.

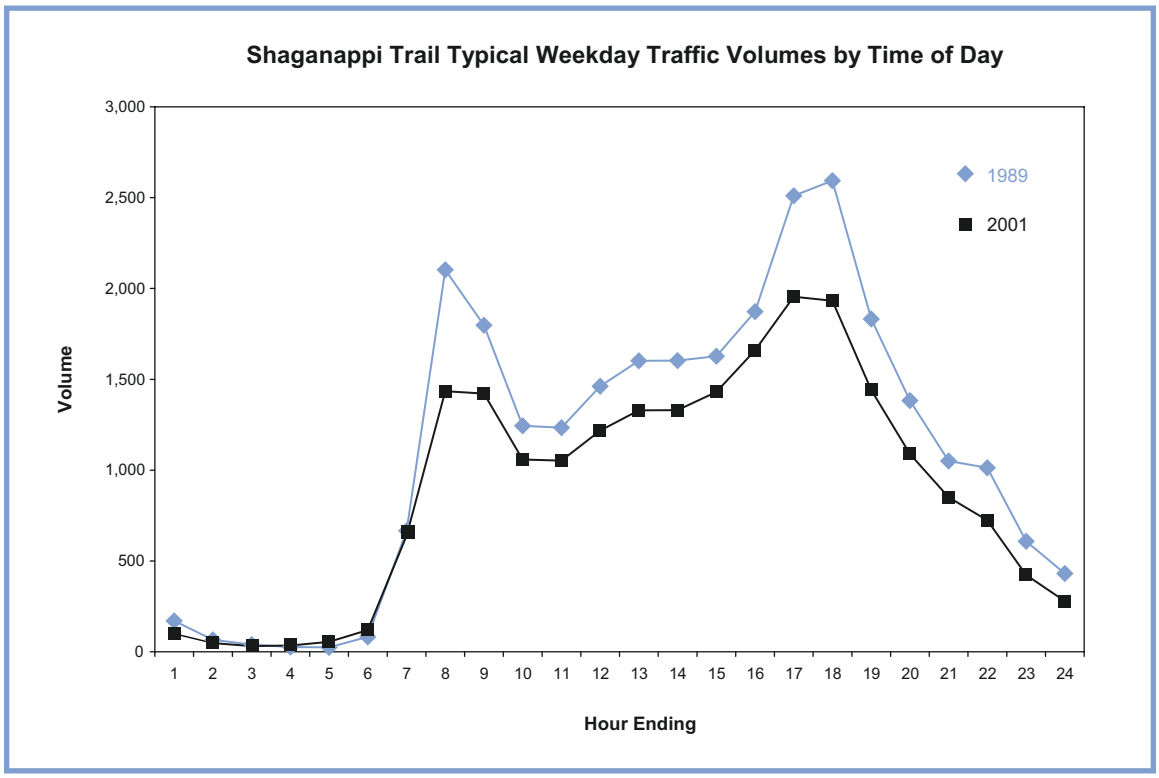
What are the Uses of Data from Permanent Traffic Monitoring Stations?

Permanent traffic monitoring stations are used primarily to collect information on day to day and seasonal patterns of traffic. These can then be used to adjust one-day counts at other locations to take into account these variations.

Permanent traffic monitoring stations can also be used to collect very detailed information on critical parts of the road network to help with decisions about improvements and operations.

KEY FINDING

Traffic volumes decreased overall from 1989 to 2001, but this decrease was greater in the morning and afternoon peak periods, and the late evening.



- Average hourly volumes were calculated for a typical weekday traffic volume for each year. Saturdays, Sundays, statutory holidays and other unusual days, such as a Friday before a long weekend or a snow day were excluded.
- The biggest decreases were 668 vehicles in the 7 a.m. to 8 a.m. time period and 660 vehicles in the 5 p.m. to 6 p.m. time period. The only time period showing an increase was from 3 a.m. to 6 a.m., when the volumes were very small.
- In 1989, the highest hourly volume was 2,593 vehicles during the 5 p.m. to 6 p.m. time period. In 2001, the highest hourly volume was 1,955 vehicles during the 5 p.m. to 6 p.m. time period.

How Accurate and Reliable is this Data?

How concerned should you be by the potential for error in the data presented in The *Mobility Monitor*? Traffic on a road can vary by as much as 10% from one day to the next. The data used in this *Mobility Monitor* are from the permanent counting stations. Data was available for all relevant days for each year, virtually eliminating any uncertainty due to sampling. The limitations of the counting machines will cause a small amount of uncertainty, but this should not be an important issue in this analysis. Even so, a change from one year to the next may be due to some random event, such as the weather, accidents or illness. This is why it is wise to look at trends, since changes that are consistent over a long period of time are more likely to be real, and not just the result of random events.