



# Mobility Monitor

ISSUE #3 - SEPTEMBER 2003

## CHANGES IN THE MORNING PEAK HOUR 1991 TO 2001

One of the goals of the Calgary Transportation Plan is to encourage people to shift their travel away from the peak hours of the transportation system. This *Mobility Monitor* looks at changes in the morning peak hour using data from 10 permanent traffic monitoring stations in Calgary. The morning peak hour is defined as the one-hour period in the morning with the highest traffic volume.

### KEY FINDING

***At all permanent traffic monitoring stations there is evidence of peak spreading with people changing their travel time away from the morning peak hour.***

Peak Hour Traffic Volumes as a Percentage of 6:00 a.m. to 9:00 a.m. Traffic Volumes for 1991 and 2001							
Permanent Traffic Monitoring Station	1991			2001			Change in Peak Hour % 1991 to 2001 (see note*)
	Peak Hour Traffic Volume	6:00 a.m. to 9:00 a.m. Traffic Volume	Peak Hour as a % of 6:00 a.m. to 9:00 a.m. Traffic Volume	Peak Hour Traffic Volume	6:00 a.m. to 9:00 a.m. Traffic Volume	Peak Hour as a % of 6:00 a.m. to 9:00 a.m. Traffic Volume	
14 ST NW Southbound south of 2 AV NW	1,513	3,255	46.5%	1,657	4,057	40.8%	-5.6%
16 AV NE Westbound west of Deerfoot TR NE	1,962	4,167	47.1%	2,084	5,048	41.3%	-5.8%
Blackfoot TR SE Northbound north of 42 AV SE	1,238	2,670	46.4%	1,579	3,575	44.2%	-2.2%
Crowchild TR Bridge Southbound south of Memorial DR	3,186	6,841	46.6%	3,781	8,606	43.9%	-2.6%
Fairmont DR SE Northbound south of Avonburn RD SE	841	1,650	51.0%	908	1,858	48.9%	-2.1%
Louise Bridge Southbound south of Memorial DR	2,330	4,416	52.8%	2,154	4,983	43.2%	-9.5%
McKnight BV NE Eastbound west of Deerfoot TR	1,299	2,812	46.2%	2,437	6,034	40.4%	-5.8%
Northmount DR NW Eastbound west of 19 ST NW	736	1,432	51.4%	589	1,186	49.7%	-1.7%
Ogden RD SE Northbound south of Bonnybrook RD SE	527	1,116	47.2%	687	1,502	45.7%	-1.5%
Shaganappi TR NW Southbound south of 32 AV NW	1,569	3,134	50.1%	1,177	2,714	43.4%	-6.7%

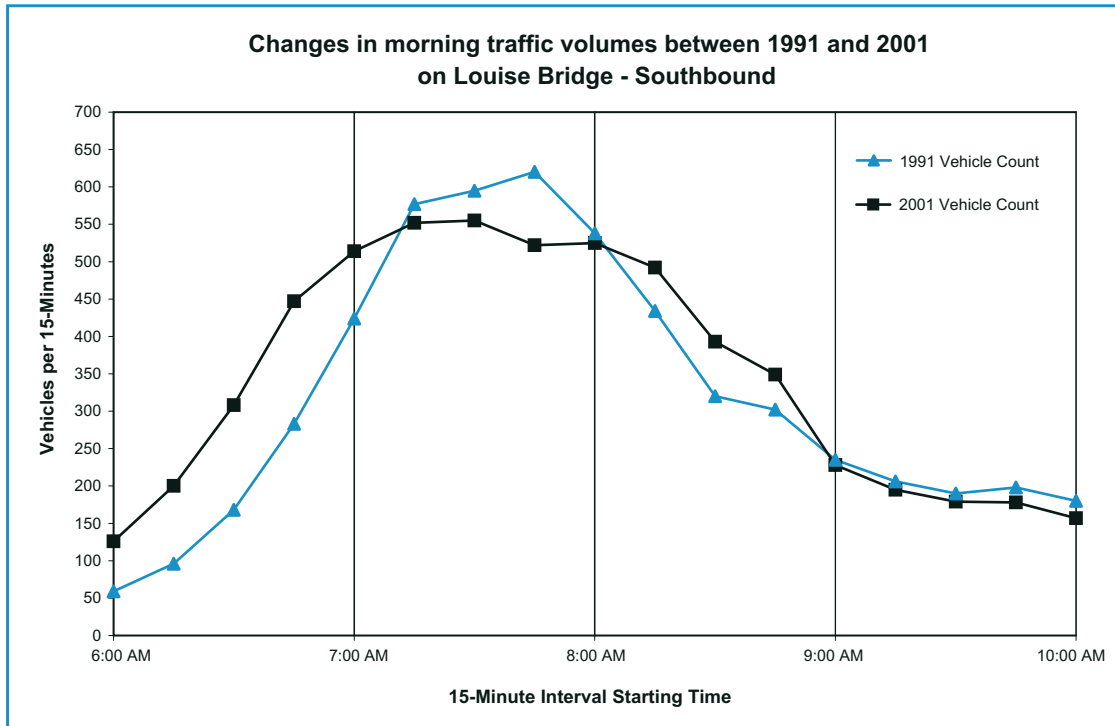
\*Last column is the change in the peak hour as a percentage of the 6:00 a.m. to 9:00 a.m. traffic volume between 1991 and 2001.

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.

- From 1991 to 2001 the morning peak hour traffic volume as a percentage the total traffic volume between 6:00 a.m. and 9:00 a.m. decreased at all 10 permanent traffic monitoring stations.
- Even when the traffic volumes dropped from 1991 to 2001 there was still a decrease in the percentage of traffic volume in the peak hour. Both Shaganappi Trail NW and Northmount Drive NW experienced lower traffic volumes.

## KEY FINDING

*On Louise Bridge southbound in 2001 the morning peak traffic starts earlier and lasts longer than in 1991.*



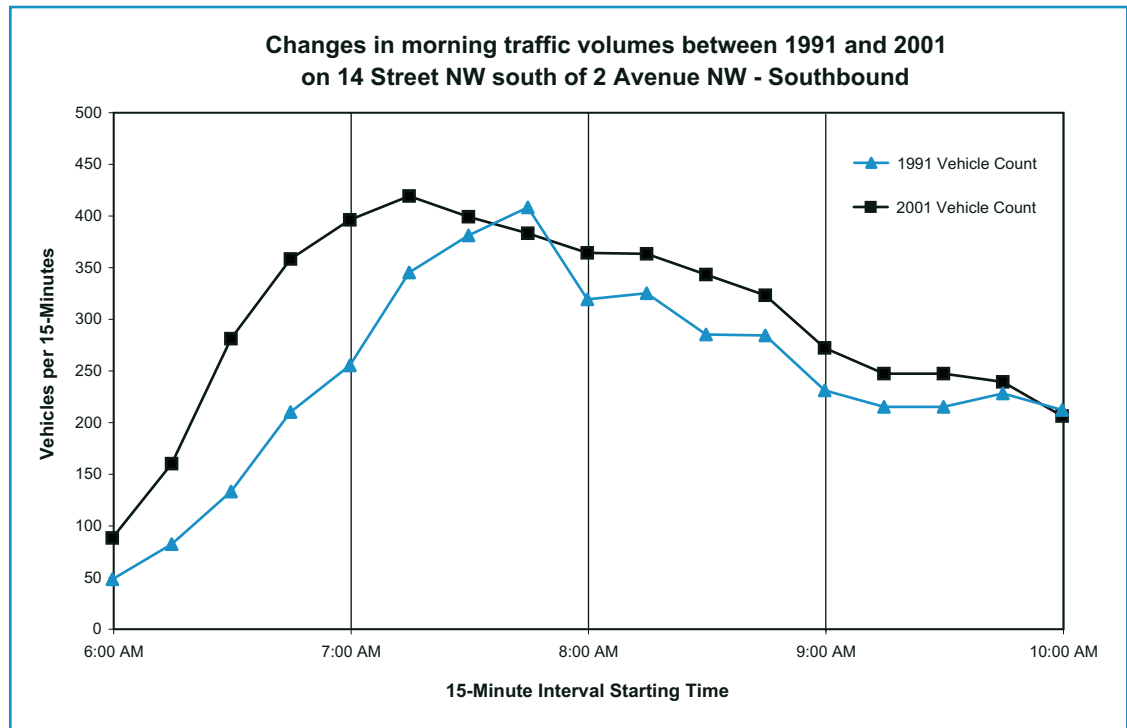
- The total number of vehicles crossing Louise Bridge between 6:00 a.m. and 9:00 a.m. grew from 4,416 in 1991, to 4,983 in 2001, an increase of 13%. The closure of the Centre Street Bridge in 2000 may have continued to affect Louise Bridge traffic into 2001.
- The morning peak hour was between 7:15 a.m. and 8:15 a.m. in 1991 on Louise Bridge. This did not change in 2001, but there was substantial growth in traffic in the 6:00 a.m. to 7:15 a.m. and the 8:15 a.m. to 9:00 a.m. time periods.
- The total number of vehicles crossing Louise Bridge during the morning peak hour dropped from 2,330 in 1991, to 2,154 in 2001. This was a decrease of 8%.

## Permanent Traffic Monitoring Stations in Calgary

The City of Calgary maintains 12 permanent traffic monitoring stations within the city limits. At these stations electronic machines collect information on vehicles passing the station every 15 minutes every day all year long. This data provides information on how the number of vehicles on the roads varies from one day to the next and throughout the year. The City is working to increase the number of permanent traffic monitoring stations.

## KEY FINDING

*On 14 Street NW south of 2 Avenue NW southbound in 2001 the morning peak traffic starts earlier and lasts longer than in 1991. The morning peak hour has moved to an earlier time.*



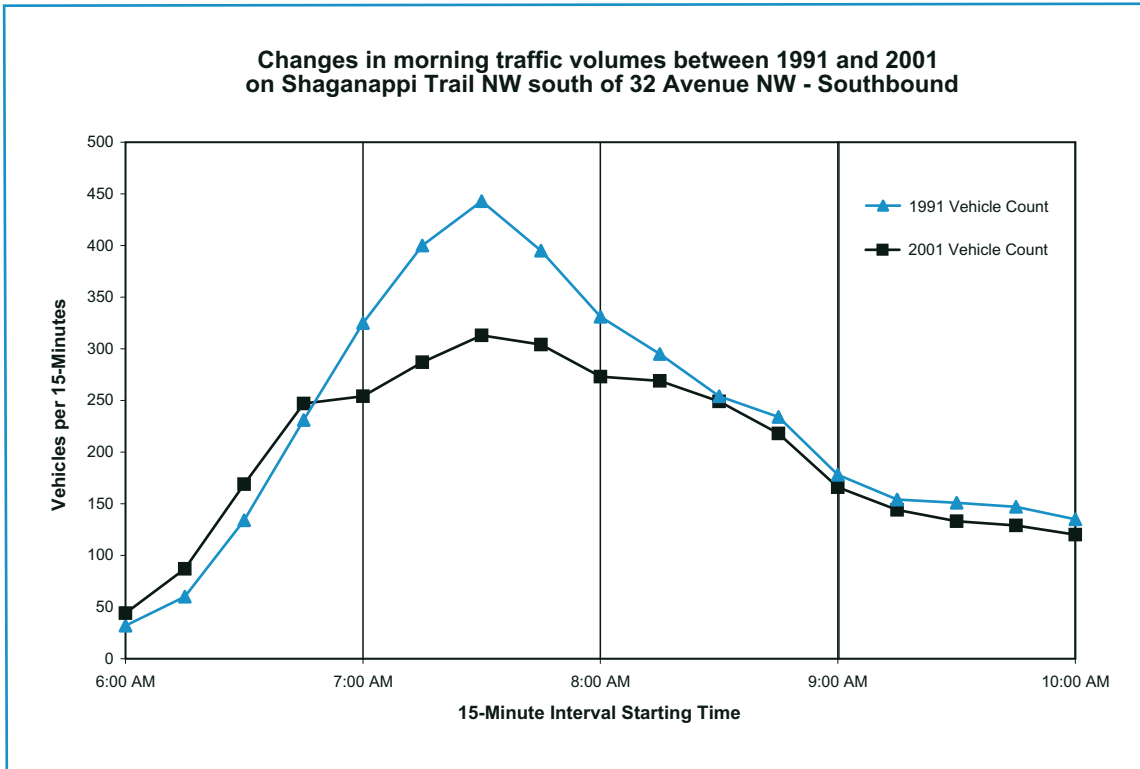
- The total number of vehicles on 14 Street NW south of 2 Avenue NW southbound between 6:00 a.m. and 9:00 a.m. grew from 3,255 in 1991, to 4,057 in 2001, an increase of 25%. The closure of the Centre Street Bridge in 2000 may have continued to affect 14 Street NW Traffic into 2001.
- The morning peak hour in 1991 was between 7:15 a.m. and 8:15 a.m. on 14 Street NW south of 2 Avenue NW southbound. This changed to 7:00 a.m. to 8:00 a.m. in 2001. Again there was substantial growth in traffic in the 6:00 a.m. to 7:15 a.m. time period.
- The total number of vehicles on 14 Street NW south of 2 Avenue NW southbound during the morning peak hour grew from 1,513 in 1991, to 1,657 in 2001, an increase of 10%.

## Peak Traffic Trends Study

This report uses information from the study "Peak Traffic Trends in Calgary between 1991 and 2001: Based on Permanent Count Station Data" which is available on the Transportation Data website. This study used data from 10 of the 12 permanent traffic monitoring stations. Traffic volumes for the peak direction by 15-minute periods from 6:00 a.m. to 10:00 a.m. were calculated for the average weekday at each permanent count station for 1991 and 2001. Some weekdays (for example: holidays, Christmas Eve and Stampede Parade Day) were excluded because they are not typical.

## KEY FINDING

**On Shaganappi Trail NW south of 32 Avenue NW southbound the volume of traffic on the morning peak hour has gone down, while traffic outside the peak hour has stayed unchanged or gone up.**



- The total number of vehicles on Shaganappi Trail NW south of 32 Avenue NW southbound between 6:00 a.m. and 9:00 a.m. dropped from 3,134 in 1991, to 2,714 in 2001. This was a decrease of 13%. This decrease may reflect the construction of the Stoney Trail Bridge across the Bow River.
- The morning peak hour in 1991 was between 7:15 a.m. and 8:15 a.m. at the Shaganappi Trail NW Permanent Traffic Monitoring Station. This did not change in 2001.
- The total number of vehicles on Shaganappi Trail NW south of 32 Avenue NW southbound during the morning peak hour dropped from 1,569 in 1991, to 1,177 in 2001. This was a decrease of 25%. Most of the drop in traffic at this location was in the morning peak hour. The vehicle traffic before 7:00 a.m. increased.

## 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 is 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.