

Mobility monitor

Transportation Data

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This issue

Parking in Downtown Calgary

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KEY FINDING:

Transit ridership is highest when parking supply is lowest.

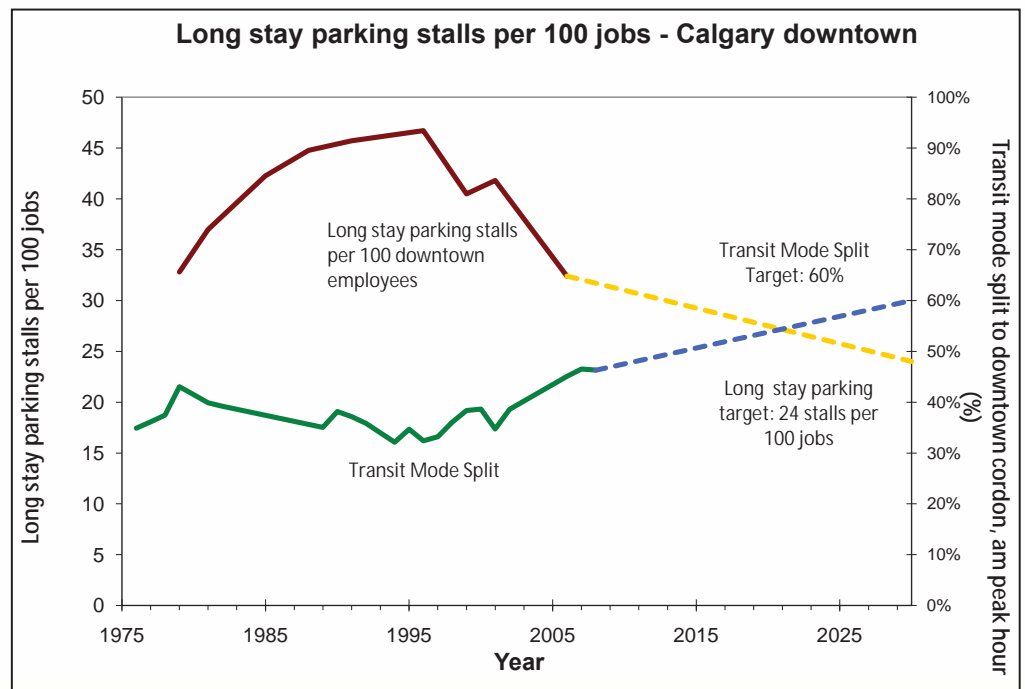
The use of transit is closely linked with the available parking supply in the downtown. As parking supply is reduced, people tend to use their cars less and shift to other modes of travel such as walking, cycling and especially transit.

During the 10 year time period from 1996 to 2006, the downtown long stay parking supply ratio decreased from 46.7 parking stalls per 100 employees in 1996 to 35.5 parking stalls per 100 employees in 2006.

During the same time period, more people used transit as their preferred travel option to downtown. The percentage of people

using transit increased from 32% in 1996 to 45% in 2006, while the percentage of people driving their car decreased from 49% to 37%, respectively.

To achieve the goals of the Downtown Parking Strategy, Centre City Plan and the Calgary Transportation Plan, the long stay parking supply should continue to be thoughtfully managed. This can be accomplished through developing surface parking lots, parking requirements for new construction in the downtown and by limiting the creation of new permanent or temporary long stay commercial parking facilities.



Targets and where do they come from?

The relationship between parking and transit use is well understood. Morrall and Bolger (1996) analyzed transit use and parking data for several Canadian and American cities. Using mathematical techniques, they found a close relationship between the amount of long stay parking stalls and the transit mode share to the downtown:

- The larger the city, the smaller the ratio of long stay parking stalls per 100 downtown employees
- The fewer long stay parking stalls provided, the higher the transit ridership.

The 1995 Calgary GoPlan introduced the 2024 target of 50% transit mode split to downtown which relates to 32 long stay parking stalls per 100 downtown employees.

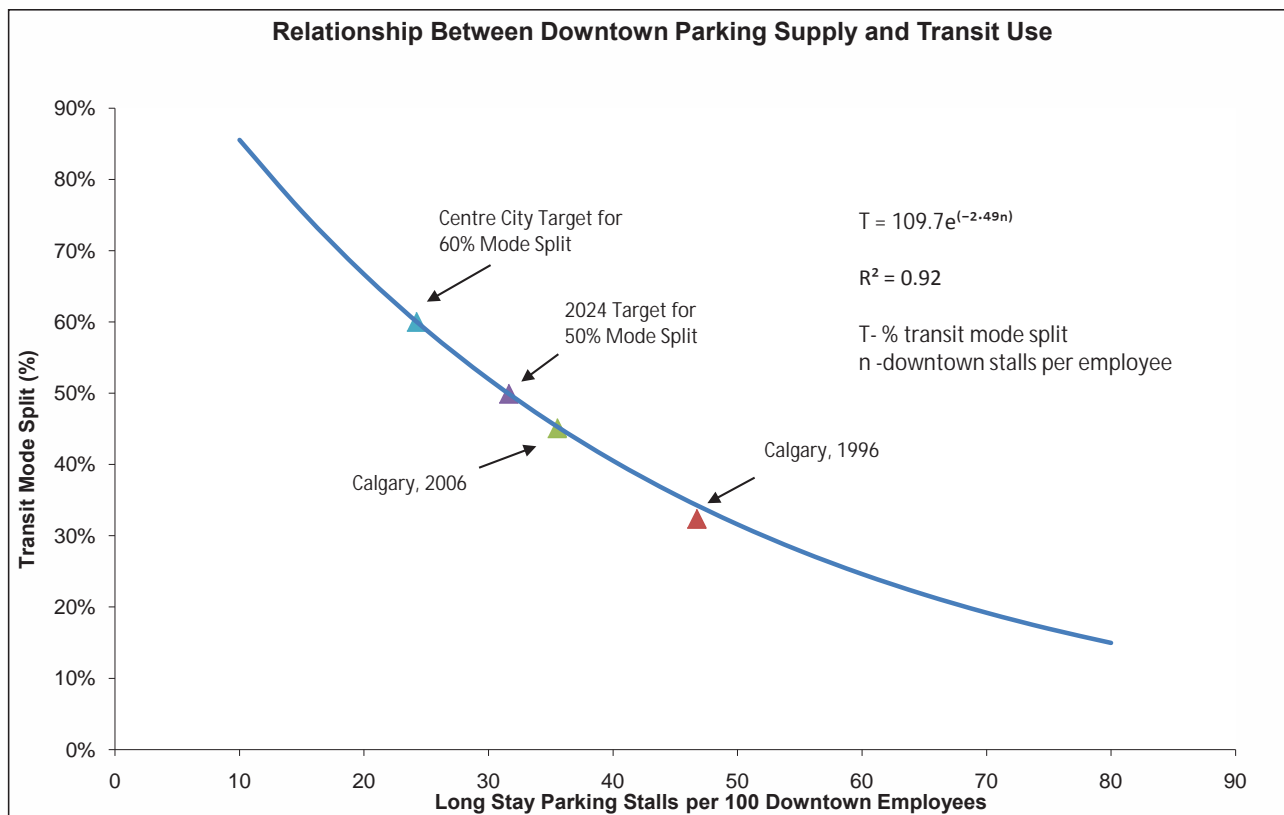
The target of a 60% mode split to downtown for transit was introduced in the Centre City plan. It was recognized at that time, that Calgary was quickly approaching the 50% target originally set out in the 1995 Calgary GoPlan. In order to plan for the future, a 60% mode split target was set. Using the relationship between the transit mode split and long stay parking stalls, a target of 24 stalls per 100 employees was obtained.

From 1996 to 2006 the number of long stay parking stalls grew by about 4 per cent, from 41,200 to 43,000. During the same period, the number of jobs in the downtown grew by 37 per cent from 88,300 to 121,000.

It is important to note that downtown jobs in this calculation exclude jobs held by people living outside Calgary city limits. At the time when the relationship between parking and transit use was established, data were available only for jobs that were held by people living within city limits. In recent years, in addition to downtown jobs held by people living in the city, data on jobs held by people living in the region are available.

In 2006, there were 17,300 downtown jobs held by regional residents (12.5% of total 138,300 downtown jobs).

In the future, new targets need to be developed based on total downtown employment (including downtown jobs held by people living in the region).



Source: Morrall, J. and Bolger, D. 1996. *The Relationship Between Downtown Parking Supply and Transit Use*. ITE Journal. Feb 1996, pp. 32-36

Why manage parking supply?

There are several reasons that make it desirable to strategically manage parking supply, particularly in the downtown core. These include:

Traffic congestion - Policies that do not limit parking supply can lead to an oversupply of parking (particularly in downtown where prices are high). While increased parking supply might reduce prices, it would also increase the amount of auto trips to the downtown. The increased auto traffic would have widespread congestion impacts in the downtown and on all routes drivers are using to travel downtown. The savings from lower parking prices would end up costing all travelers in terms of increased travel times and wasted fuel.

Roadway capacity – Roadway access to downtown Calgary is limited by a number of constraints, including the Bow River, the CPR railway line, Stephen Avenue Mall and the 7 Avenue transit corridor. As no major roadway widening into the downtown is planned, growth in travel to the downtown should be accomplished by other modes of travel (transit, walking and cycling). Without adding additional roadway capacity in and out of downtown, additional parking supplies will promote auto use and exacerbate congestion problems on downtown roadways. Furthermore, increasing roadway capacity to and from the downtown would have negative implications for the quality of living in adjacent city communities and is not supported by the Inner City Transportation System Management Strategy.



Land consumption – Surface parking lots represent an inefficient use of land and a missed opportunity to contribute various livable, vibrant and attractive public and private developments within the community.

Unattractive land use – Surface parking lots take away from the public realm by providing limited pedestrian activity. These lots are not pedestrian friendly and do not contribute to the aesthetics of the surrounding environment.

Expensive to build – Parking stalls are expensive to construct (costs can range up to \$80,000 per stall in an underground facility).

Encourage sustainable modes of travel – Sustainable modes of transportation (walking, cycling and transit) are convenient and reliable travel choices to downtown for many Calgarians. For many years, more than 60% of all AM peak hour trips to downtown have been made by non-single occupant vehicle.

It is more economical and environmentally prudent to add capacity to transit and improve walking and cycling facilities to increase the amount of people moving in-and-out of downtown versus constructing additional roadways and bridges for vehicles. By improving facilities and capacity of sustainable modes of transportation, the level of service improves for these travel choices, consequently making them more attractive.



How are long stay parking spaces defined?

Long stay parking spaces include any parking space where parking longer than four hours is permitted, excluding all on-street spaces and private residential spaces.

What is the downtown?

In this Mobility Monitor the downtown is defined as the area bounded by the Bow River on the north, the Elbow River on the east, the CPR tracks on the south and 14th Street on the west.

What are the implications?

The supply of parking in the downtown plays an integral role in many decisions. It influences the choices travelers make: whether it is to drive or take transit, where they travel to (downtown or elsewhere), how much parking costs them and the levels of congestion on roadways both downtown and city-wide.

In order to achieve the desired transit mode split in the downtown set out in the Centre City Plan (60%), continuing to manage downtown parking supply (per the Downtown Parking Strategy) will help in achieving such a target. Moving towards more use of transit, cycling and walking will provide environmental benefits and mitigate the effects of congestion in the downtown area.

When setting parking policies, it is important to strike a balance between achieving the above outcomes while maintaining business in the downtown core. If policies are too restrictive, businesses may move elsewhere in the city. Emphasizing high quality, alternative travel options such as transit can help mitigate these impacts and make the downtown an attractive place for businesses to be located.

Over the last few decades, Calgary's Downtown has demonstrated that it is possible to create a livable, diverse and enhanced urban form through a managed parking supply and provision of a high quality transit service.

Regular review of the Downtown Parking Strategy is necessary to ensure that the role of parking continues to contribute to the goals of the Centre City Plan and to make these achievements a success.

Sources of information

The number of parking spaces in downtown Calgary was provided by Transportation Data. This is based on an annual inventory of downtown parking supply.

Mode split data was obtained from Transportation Data's downtown cordon count program.

Historical job estimates were provided by the Forecasting division, which collects this information every five years using a survey done as part of the Civic Census (the Place of Work Survey). These were used in determining the ratio of long stay parking stalls per 100 jobs in the downtown.

The article "The Relationship Between Downtown Parking Supply and Transit Use" by Morrall, J. and Bolger, D. was published in the ITE Journal, February 1996, pp. 32 – 36.

The Centre City Plan was approved by City Council in May 2007.

The Downtown Parking Strategy summarizes a number of Council decisions relating to parking in downtown Calgary. It was published in September 2008.

The Inner City Transportation System Management Strategy was approved by City Council in July 2000.

How accurate and reliable are these data?

How concerned should you be by the potential for error in the data presented in The Mobility Monitor? The population is derived from the Civic Census which is a reliable source of information. The number of jobs is based on a survey of about 10% of the population, and therefore subject to some uncertainty. The number of parking stalls in the downtown is based on an inventory, where the parking spaces are identified and counted.

It must be kept in mind that no one source of information can claim to be infallible. Consideration and appropriate weighting of other sources of information is to be encouraged before making decisions.

The Mobility Monitor

As part of the Calgary Transportation Plan (CTP) Implementation Framework, a Monitoring and Reporting Program has been established. The purpose of the Mobility Monitor is to report on strategic trends and events that affect the implementation of the CTP. The Mobility Monitor is produced by the Transportation Data division of Transportation Planning.