

Express bus corridors increasingly popular transit option

By JONATHAN YAZER

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In recent years, Los Angeles and New York have started successful bus express services; Ottawa and Vancouver have long histories of them; several major projects reshaping transit debate in Toronto

Fast, comfortable and reliable are not normally words that spring to mind when people think of bus transit.

But as the populations of cash-strapped North American cities continue to grow, express buses that travel on dedicated lanes are becoming an increasingly popular alternative to pricier transit options, such as light rail and subways.

Roughly 120 cities around the globe have Bus Rapid Transit or express bus corridors, with 97 of them having launched in the past decade alone, according to a recent survey. The BRT movement has been most pronounced in developing countries, but several major projects are now reshaping the transit picture in the Toronto area.

These and other BRT initiatives are also changing the public's attitude toward bus travel. Express buses are higher occupancy than the average city bus, and some have features such as wireless Internet to entice new riders.

As for speed - a common knock against typical bus travel - it's been greatly enhanced under the BRT model. Although no two systems are exactly alike, the essential element of any rapid bus service is a dedicated laneway that permits buses to travel at speeds up to or greater than subway trains, which is why some advocates refer to BRT as "surface subway."

Jeff Casello, an associate professor of transportation at the University of Waterloo, said the BRT movement can largely trace its origin to the South American experience, where express buses are central to several cities' transit networks. In North America, he said Bus Rapid Transit and light rail are increasingly filling the transportation gap between conventional buses and subways.

"Typically, we use BRT for longer applications," Prof. Casello said. "But as the demand starts to grow and you start to need buses more frequently, then the labour costs of BRT grow really quickly." In these cases, light-rail service may be the better option, he added.

In recent years, both Los Angeles and New York have started successful bus express services. The Orange Line BRT in California's largest city opened in 2005, spanning about 23 kilometres and carrying nearly 27,000 people daily. It's

been more popular than expected, already nearing peak capacity.

Outside Toronto, Mississauga and York Region are proceeding with plans to construct nearly 60 kilometres of dedicated lanes for express bus service. Portions of these new lanes will contribute to a 100-kilometre bus corridor that will eventually extend from Oakville to Pickering.

The new BRT routes are expected to deliver huge time savings to transit users. For instance, the City of Mississauga predicts the transit trip from city centre to Pearson International Airport will drop to 19 minutes from 41 minutes.

In Toronto, express bus service is being floated as an alternative to light-rail transit on Finch Avenue West, where plans for LRT service were recently shelved. BRT has the potential to become a third way in a Toronto transit debate dominated by supporters and opponents of surface and underground rail.

Subway proponents can support BRT because of its lower upfront capital costs, which can free up money for expensive subway construction, while some advocates of light rail believe that BRT can at least offer some degree of service improvement while also laying the groundwork, literally speaking, for future LRT lines.

A 2006 Toronto Transit Commission study calculated that building a BRT in the Finch hydro corridor, even with a number of construction and design issues such as the Highway 400 crossing, would cost about \$27-million per kilometre in today's dollars. A centre-lane right-of-way down Finch Avenue West in north Toronto would be somewhat costlier because of the need to widen the road.

By contrast, the Finch West LRT, the cheapest proposed under Transit City, would have cost an estimated \$85-million per kilometre. In total, roughly \$600-million could be saved upfront on Finch if BRT was built in place of LRT.

"BRT in general is definitely an option worth exploring because it can be a cost-effective way of moving people around," said TTC chair Karen Stintz. "But any BRT needs to be done properly, with its own right-of-ways, so that they're convenient and effective means of moving people."

Ms. Stintz said in the short term the TTC is not in a financial position to consider using BRT as a substitute for shelved LRT lines, but that there is no question it could be a viable option in the long term.

But BRT might have great applicability on some of the region's 400-series highways, such as the 401 and the 407, as part of an inter-regional transit service, she said. A portion of the planned Mississauga BRT will run on the 403.

The TTC already operates a handful of "Rocket routes," some of which travel on highways for portions of their trips. But the buses on all of these routes operate in mixed traffic from start to finish.

Ottawa and Vancouver are two Canadian cities with longer histories of express bus service. Their experiences were successful, but population growth and congestion prompted them to increasingly turn to light-rail transit.

Ottawa, in fact, has long operated one of North America's most successful BRT networks, moving 230,000 people on an average weekday. But the system is experiencing congestion problems in the downtown area and it's expected to reach peak capacity by 2017. In response, the city plans to replace some portions of its BRT with an underground light-rail line to serve the downtown core.

So, could Toronto meet more of its transit needs with BRT? There is no simple answer.

Adrienne Batra, press secretary for Toronto Mayor Rob Ford, said the mayor's preference is for "enhanced bus service" on Finch Avenue West and that he hopes the process moves forward in a timely manner.

Express bus service design features include widely spaced stops that function more like streetcar or LRT platforms. Most operate some kind of prepaid, proof-of-payment ticketing to expedite loading and unloading.

Light-rail supporters, however, observe that trains have longer operating lives, lower overall maintenance costs and lower costs per operator because they carry more passengers than buses. Roads also tend to require more frequent repairs than rail.

Indeed, BRT hasn't always won the day in Mississauga. Last year, Mississauga City Council endorsed LRT instead of rapid bus service for its master plan of Hurontario Street and Main Street. A major reason for the decision was that developers said they prefer the sense of permanence attached to light-rail transit.

LRT advocates often argue that light rail has better interaction with the streetscape and is a better way of achieving dense, transit-oriented development than BRT.

With a report from Renata d'Aliesio

AROUND THE WORLD - IN AN EXPRESS BUS LANE

From Curitiba, Brazil, to Guangzhou, China, many cities have had success with this transit option

While Bus Rapid Transit is a novel technology in most of North America, other cities around the world have experimented with it for decades. As populations grow and gas prices rise, more cities are catching on to BRT:

Curitiba, Brazil has the oldest and still the largest BRT system in the world. It carries two million people a day and is regularly used by as many as a third of the city's inhabitants. The Curitiba example has inspired other Latin American cities such as Bogota and Mexico City to adopt large-scale BRT systems.

The new BRT service in Guangzhou, China's third largest city, moves 800,000 people a day across a network that stretches 275 kilometres and was built at one-tenth of the cost of a subway extension. Although the buses are often congested - up to one every 10 seconds in the peak hour - they still move on average 30 per cent faster than before, when they operated in mixed traffic.

New York launched its first service in the Bronx in 2008. When it achieved 20-per-cent faster travel times and boosted ridership by over 5,000 passengers a day, the city moved quickly to create a city-spanning enhanced bus service network. The newest line travels from 126th Street in the East Bronx to the South Ferry at the tip of Manhattan. Transit experts generally consider this an example of "BRT light" since it consists mainly of painted laneways rather than physically separated lanes.

Los Angeles' Orange Line BRT opened in 2005. It runs 22.5 kilometres and carries nearly 27,000 people every day. There are concerns that the line is so popular that it has become a victim of its own success, nearing its peak capacity within a short time of its opening, far sooner than was expected.

In Vancouver, in 2006, a decision was made to replace the highly successful, five-year-old bus corridor in Richmond with LRT, in order to have greater capacity. The experience has not discouraged British Columbia from pursuing BRT. To the contrary, the province will invest \$1.2-billion on nine new BRT routes through the high-growth urban centres of Kelowna, Victoria and Metro Vancouver over the coming decade.

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