

ST. GEORGE STREET REVITALIZATION: “ROAD DIETS” IN TORONTO

Organization

City of Toronto

Status

St. George Street revitalization completed
Other lane conversion projects ongoing

Overview

The term “road diet” is relatively new, although the actual practice has been used for many years in cities like Toronto. Typically, three- and four-lane roads are put on a “diet” to narrow them to two or three-lanes. Many road diets also involve the addition of separate bicycle lanes and/or wider sidewalks. Road diets are done for a variety of reasons: to increase safety, reduce traffic, increase pedestrian and cycling amenities, create a more aesthetically pleasing community area, or some combination of these factors.

The goals of the St. George Street revitalization were to calm traffic on this street that flowed through a campus of the University of Toronto, to increase pedestrian and cycling amenities, and in general, to create a more pleasant area.

At a cost of \$6 million, four lanes on St. George Street were reduced to two, sidewalks were widened and greenery was added. Speed and traffic collisions have decreased even though the number of cars carried on the road did not.

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Resources

- City of Toronto www.toronto.ca

Community context

St. George Street was originally a two-lane boulevard in an affluent section of the city. During the 1940s, the road was widened to four lanes and the University of Toronto acquired many of the homes along St. George. By 1993, this 1.8-kilometre, 14-metre wide stretch of St. George between College and Bloor Streets, was carrying 7,300 cars per day. Because of its proximity to a university campus, pedestrian and bicycle traffic was also relatively high.



A section of St. George circa 1994. The street had fallen into disrepair and was in need of rehabilitation.

Policy context

Toronto city staff focused on road construction and rehabilitation throughout much of the 1980s without much consideration of a balance among motorists, cyclists, pedestrians, and transit users. Over the next decade, traffic congestion in Toronto increased substantially. By the mid 1990s, the city was, as John Niedra says, “Getting a clear message that we needed more sensible road design.”

Most of Toronto’s downtown roads have an average lifespan of 70-80 years. The city’s road classification policy—which determines the type and use of roads (expressway, arterial, minor arterial, collector,

residential)—sets the level of service required for each type of road (e.g., road conditions, vehicle, transit, pedestrian and cyclist traffic, etc.). This policy in turn helps set the priorities for repaving and rehabilitation.

Staff regularly review major city roads and intersections to see which are best suited to lane narrowings, and periodically update an inventory of the best candidates.

After the city was amalgamated in 1997, all transportation policies, which included the road, cycling and pedestrian network, began to be harmonized. A separate city bicycle plan was then overlaid atop the road construction plan, giving staff a more holistic view of how city roads should be revitalized.

In addition, Toronto was the first city in North America to sign a pedestrian charter—and incorporate it into its Official Plan—that includes the principles of accessibility, equity, health and well-being, environmental sustainability, personal and community safety, and community cohesion and vitality.

Rationale and objectives

Although staff had identified St. George as a candidate for rehabilitation, in 1995 the city was not actively pursuing a road diet for the street. When a local benefactor, loosely affiliated with the University of Toronto, challenged the city to revitalize and beautify the street, staff began a more detailed investigation. As an incentive, the benefactor contributed \$1 million of her own personal funds to the project.

Mr. Niedra reports that the St. George road diet was an opportunity for the city to demonstrate that roads are part of a community (not merely a conveyance for automobile traffic) and that road and street design can be sensitive to the needs of all users—pedestrians, cyclists, and motorists.

The city’s three objectives were to:

- Increase pedestrian use by enhancing pedestrian space.
- Calm traffic.
- Enlarge the existing open greenspace.

Actions

Public consultation. The city discussed the road narrowing primarily with the University of Toronto community (the co-proponent and owner of most of the surrounding buildings), and some discussions were held with adjacent neighbourhood groups.

Establishing baseline information. Two reports were prepared (fall 1995 and January 1996) that reviewed the current architectural, traffic, engineering and structural

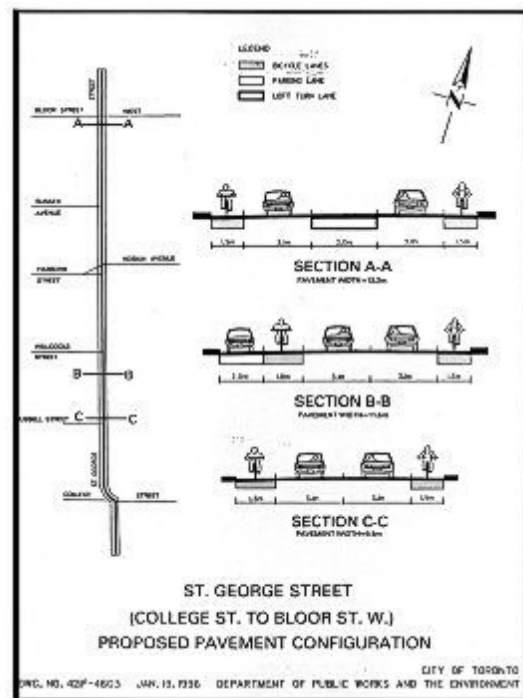
conditions of the street. The final 1996 report was presented before council for approval.

Architectural expertise. The city retained an architectural firm to design a new look for the street that would complement the road narrowing. The architects sought to balance the needs of vehicle, bicycle, and pedestrian traffic, lighting, and the existing campus buildings.

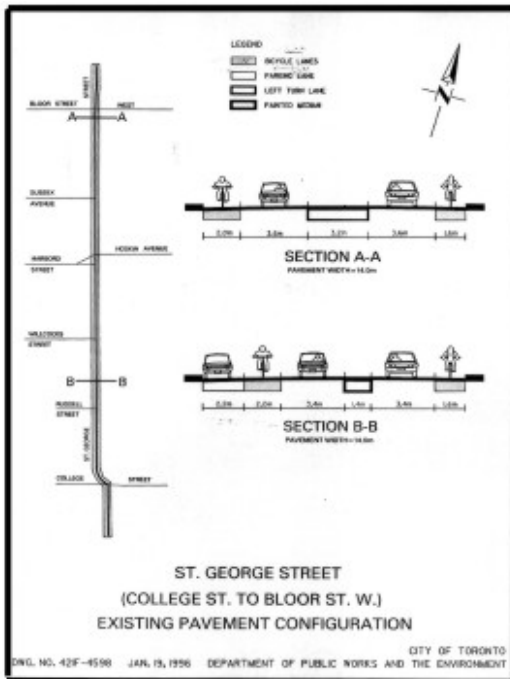
Narrowing road widths. St. George was narrowed from 14 metres in width to between 9.5 and 12.2 metres, depending on the section of road, and road lanes were decreased from four to two.

Sidewalks and bicycle lanes. Sidewalks were widened from 1.5 - 2 metres to 2.5 - 5+ metres. Two bicycle lanes already existed along each side of St. George and these were extended to an additional section of the street as part of the project. The bike lanes were narrowed slightly in order to provide additional pedestrian space, but are still wide enough to maintain cycling safety.

The graphic immediately below depicts the current conditions. Section C is the new section of St. George with the extended bicycle lanes. The diagram beneath depicts the previous conditions.



Architectural features and greenery. Benches and water fountains were added in some areas. Three new rows of trees were planted along St. George that reinforce the pattern of the existing trees and add shade and wind protection. Planters between the sidewalk and the road act as buffers and reduce noise. New light standards increase visibility and enhance pedestrian safety.



Pedestrian crossings. Pedestrian crossings were installed at several places along St. George. Crossings are made of interlocking brick to differentiate them from the rest of the roadway.



Above: An aerial view of the pedestrian crossing near the intersection of St. George and Sussex.

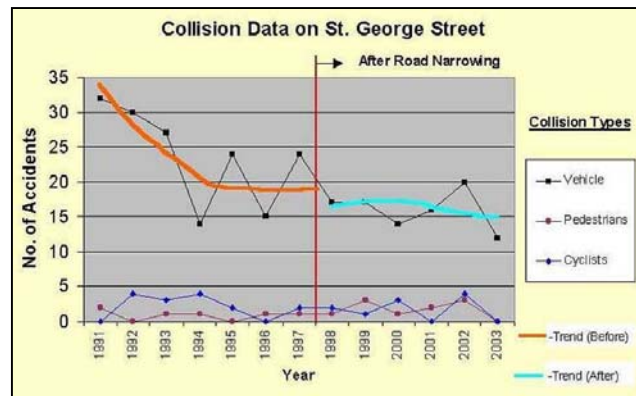


Above: Similarly, a pedestrian crossing was added to connect the urban square at Sidney Smith Hall to street level.

Results

Speeding reduced. Prior to construction of the first bicycle lanes in the early 1990s, the Toronto Police reported that they had regular speed traps on St. George. Dan Egan explained that when a road is narrowed to provide only one lane in each direction, speed is automatically reduced because there is no room for motorists to overtake other cars. Drivers also slow down at pedestrian crossings.

Traffic collisions decreased. During the period 1991 to 1997, there were about 24 vehicle crashes along St. George. The six-year period following road narrowing saw a decrease of 40% (down to 16 collisions).



Traffic and bicycle volumes. A 1993 traffic count found that St. George carried about 7,300 cars in peak hours daily (or 16,000 in total per day). By 2003, virtually the same number of cars travelled on the road (7,400 in peak hours, 16,000 daily). Dan Egan noted that, in general, downtown traffic volumes in Toronto have not increased for the past 20 years. By revitalizing the street and making it more efficient, St. George was able to carry as much motor traffic as it always had, at lower speeds, while providing more space for pedestrians and cyclists. After the revitalization of St. George, bicycle volumes increased 10%--from 1,500 cyclists per day to 1,600.

As a comparison, St. George and four other streets (Davenport, Gerrard, Sherbourne, and Harbord) were monitored for bicycle and traffic volumes before and after the roads were narrowed and bicycle lanes added. The average bicycle volumes on these streets increased by 23% with no overall change to motor vehicle volumes.

Improved quality of life. Staff from the University of Toronto said that the addition of greenery and architectural features “created a welcoming atmosphere.” The university also believes that it can use the area’s improvements as an advertisement to potential new students, researchers, and faculty members.

As reported on the University of Toronto Web site, “The St. George Street project opened people’s eyes to the opportunities to enhance open spaces elsewhere on the campus. It helped to spread the new way of thinking about living and learning on the campus to the entire University of Toronto community and led to a broad awareness of the importance of the campus open spaces and their ability to improve quality of life.”



Above: Pedestrians enjoy wider sidewalks with planters and shade trees.

Road used for community events. Since 2001, the city has closed a section of St. George as part of its annual Car Free Day, freeing up space to host active transportation events, and has been closed at other times for other community and city events.

Domino effects. Based on the success of the St. George road diet, the city narrowed other roads in Toronto including Lansdowne and the Oriole Parkway (where traffic calming measures were implemented). Dundas Street East was also narrowed from four lanes to two and bicycle lanes were added.

Recognition. The project received local media attention during construction and immediately following the revitalization. Even 10 years after the project was initially envisioned, St. George continues to receive media attention (e.g., NOW Toronto, Oct. 28-Nov. 3, 2004, www.nowtoronto.com/issues/2004-10-28/news_insight.php).

St. George was highlighted as a best practice in *Road Diets: Losing width and gaining respect* by Dan Burden and Peter Payerwey (see Walkable Communities Inc. link below).

In June 2004, Parsons Brinckerhoff, an engineering firm in Portland, Oregon, began conducting an international study of similar road diets. St. George Street is part of the study—which includes similar projects in New Zealand, the United States, and Canada. The study’s author also wrote a book on road diets—*Handbook for Livable Streets: Setting Trends by Applying the Road Diet*—available at Parsons Brinckerhoff, www.pbworld.com.

Participants

- City of Toronto
- University of Toronto

Resources

Staff. The city took a multi-disciplinary approach to the project, and staff members from the University of Toronto and several city departments were involved, including: transportation, planning, urban design, forestry, and public works.

Detailed design. Urban design and engineering support were outsourced to private-sector firms, with staff support. Functional design, such as safety aspects and ensuring that stakeholder concerns were met, was done by city staff.

Budget. The project budget was \$6 million, split among the budgets of the City of Toronto’s Public Works and Planning departments, the University of Toronto’s Campus and Facilities Planning department, a private benefactor who contributed \$1 million, and a grant from the Canada Ontario Infrastructure Works Program.

- \$1 million for repair needs, conventional pavement, sidewalk and curb reconstruction.
- \$5 million for enhancements (premium paving materials, road alterations and drainage adjustments, pedestrian scale lighting, boulevard treatments, landscaping and plantings—200 trees)

Champions. As mentioned earlier, a private citizen donated funds to this project and challenged the city to have a vision for the area. This spurred the city to act on a street that had already been identified for rehabilitation.

Timeline

1994. St. George Street identified as a key artery for lane conversion. Consultations with a private benefactor and the University of Toronto begin.

Fall 1995. Architectural, traffic, engineering and structural reports completed and presented to Toronto city council.

January 1996. Final report and recommendations completed, presented before city council and approved.

1996 to summer 1997. Construction began and was finished by the summer of 1997.

Challenges

Financial investment. Road diets are not complicated reconstruction projects, but do require adequate funding. The St. George road diet would not likely have been as extensive had it not been for the additional funds from a private benefactor.

Maintenance. There was some initial confusion over maintenance responsibilities. Maintenance is now divided between the university and the city. For example, the university maintains the greenspace features (trees, shrubs, grass verges, and planters), while the city is responsible for the roads, bicycle lanes and sidewalks. In 2004 and early 2005, underground utility work to replace cables and adjacent construction of new university buildings had loosened the brick pedestrian paving and damaged the road asphalt. Several sections of St. George will need work in the immediate future.

Lessons learned

Choose candidates carefully. Most cities do not have the financial resources to narrow each road that is tagged as a road diet candidate. In the case of St. George, the contribution of private funds and the high number of pedestrians and cyclists already using the area made the decision easier.

Integrated policies. The city integrated its road classification policy with its road, pedestrian and bicycle networks, and overlaid its road construction plan with the bicycle lane plan. This gives city staff an opportunity to view the “big picture” before making decisions on road narrowings.

Land owners are critical partners. In the case of St. George, the University of Toronto owns the land around the campus and there were, therefore, no constraints or conflicts regarding property lines.

Next steps

Occasionally, road reconstruction comes as a result of citizen input or complaint. In general, however, the road classification policy allows city planners to proceed with road rehabilitations as they come due for renewal.

The St. George Street revitalization also marked a beginning for the University of Toronto to initiate a St. George Master Plan, which sets out the policy framework for planning the campus buildings and grounds. It includes policies for landscape design, revitalizing other open spaces, landmark features, streetscapes and pedestrian networks.

For more information

Brown & Storey Architects www.browncandstorey.com, click on projects, St. George Street Revitalization

A general overview of road diets in North America can be found at Walkable Communities Inc., a Florida non-profit organization:

www.walkable.org/download/rdiets.pdf

Oregon’s Department of Land Conservation and Development has published a guide to neighbourhood street design that includes the pros and cons of street narrowings at:

www.lcd.state.or.us/LCD/docs/publications/neighstreet.pdf

Images are courtesy the City of Toronto and Brown and Storey.