Nonrecreational Cycling in Ottawa, Canada

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Ottawa, the capital of Canada, is better known for its recreational pathways than for its "other" bicycle facilities. In truth, the approximately 140 km of recreational pathways are not "bikeways" in the sense of dedicated bicycle pathways. Instead they are multiuse pathways that attract joggers, pedestrians, in-line skaters, and cyclists in large numbers. Recreational cyclists are well served by these facilities. In the past 4 years, there has been a significant shift toward examining the nature of and design for nonrecreational cyclists. Several surveys have revealed interesting data on the commuter cyclist as well as established a background of information on the demographic profile of cyclists in the area. A 1992 report by the Ottawa Cycling Advisory Group, a citizens committee advising the Department of Engineering and Works, is being used in the preparation of a plan to provide a system for utilitarian cyclists. All aspects of cycle planning will be addressed: from route design to parking provisions through zoning. An interim policy that establishes the number of bicycle parking spaces to be provided at all city buildings and facilities has been approved. In addition, several actual projects have been initiated to further encourage and support nonrecreational cycling. The Ottawa police have maintained a police bicycle squad for the past 3 years, and the city of Ottawa purchased bicycles for the use of parking control officers as a pilot project in 1993. In addition, the Regional Municipality of Ottawa-Carleton has run a program of "blue bikes" for 2 years. These bicycles are available to staff for use on corporation business. Specific development projects, such as the rebuilding of bridges, have been reviewed with the intent to incorporate bicycle facilities into the design. All of these components—research, planning, and implementation of pilot projects—have served to provide a basis for information and to support the use of bicycles for nonrecreational purposes. The completion of Ottawa's Comprehensive Cycling Plan and the implementation of the recommendations contained therein will put Ottawa back on the map, not only for recreational cycling but also for nonrecreational cycling.

Ottawa, the capital of Canada, is better known for its recreational pathways (bike paths) than for its other bicycle facilities. Recent initiatives, of both policy and design nature, are changing this reputation. These initiatives have established the important role of nonrecreational cycling in the transportation system.

The recreational pathways for which Ottawa is best known were built by the National Capital Commission (NCC) during the early 1970s as bike paths. At that time, concern over the depletion of our nonrenewable energy sources as well as a general environmental sentiment prompted much pathway development in both Canada and the United States. The pathways today provide approximately 140 km of recreational facilities for a multitude of different users. They are truly multiuse in the sense that not only recreational cyclists travel on them but many commuter cyclists as well as pedestrians, joggers, and in-line skaters use these them.

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The shift in emphasis from providing strictly recreational facilities toward providing facilities for utilitarian cycling has come partly in response to the congestion that was occurring on these pathways. As cycling has increased in popularity, so too has the number of people who are turning to the bicycle as a means of transportation. This increase has caused cycle advocates and politicians to review official policies with the intent of providing greater support for cycling. In the past 4 years, there has been a significant shift toward examining the needs of nonrecreational cyclists and designing better facilities for this sector of the transportation system.

POLICY DOCUMENTS

The importance given to the growth of nonrecreational cycling is reflected in the policy documents that have paved the way for projects. The Official Plan for the Regional Municipality of Ottawa-Carleton (RMOC), approved in 1988, contains one objective relating to energy conservation in the transportation system and two policies. The policies recognize cycling as a means of transportation not only on existing and proposed roadways, but also within transitway and utility corridors. This recognition is conditional on the feasibility of adapting such facilities to safely accommodate bicycles. In addition, a system of major bicycle corridors was identified on a schedule for use in the review of development applications.

The official plan for the city of Ottawa, approved by the council in July 1991 and currently awaiting approval by RMOC, places a strong emphasis on the protection of the quality of life in the urban environment. A number of "cycle-friendly" policies are included to encourage the use of bicycles as an alternative to the automobile. These policies appear throughout the document, reinforcing the message that planning for cycling is an integrated process.

Within this framework, Ottawa and RMOC have initiated actions to make the region as well known for nonrecreational cycling as it is for recreational cycling.

CYCLIST SURVEYS

Ottawa has long been known as the cycling capital of Canada. Claims that the city has the highest per capita cycling population have been substantiated by two recent surveys. These surveys have provided much-needed information on the number of residents who cycle (utilitarian and recreational), general characteristics of cyclists, frequency, times and distance of trip, cycling

experience (number of years cycling), safety precautions, and route preferences.

The Ottawa-Carleton cyclist profile survey was carried out in September 1991 by consultants with the assistance of the Regional Cycling Advisory Group and RMOC. The consultants placed approximately 5,400 telephone calls and conducted 930 interviews. Information on the cycling frequency and destination and purpose of the trip was obtained for approximately 2,300 persons through proxy.

The objective of the survey was to develop a profile of cycling and provide insights into cycling characteristics and opinions about cycling. For the purposes of this survey, a "commuter" cyclist was considered to be any person who cycles to work or school twice or more a week. The population of Ottawa-Carleton (urban portion) was assumed to be 589,600. A summary of the findings identified the following:

- Approximately one-half of the population is composed of cyclists, with 10 percent being commuter cyclists (in actual figures 230,000 cyclists with approximately 47,000 commuter cyclists);
- Approximately 80,000 daily cycling trips are made for nonrecreational purposes;
- Approximately 2 percent of the population had combined the use of a bicycle and public transit (bus). Responses indicated that more people would be inclined to adopt this mixed-mode transportation if safe and secure bicycle parking were provided; and
- Among the measures that would encourage more frequent cycling, enhanced facilities (on-street bicycle lanes), cyclist training, and bicycle parking all were noted as high priority.

Earlier that same year, in June 1991, a survey of commuter cyclists was conducted during Bike to Work Week with the assistance of the Ottawa Cycling Advisory Group and Citizens for Safe Cycling. The survey was administered to a random sample of 2,000 commuter cyclists representing a cross section of the geographic area within RMOC. The response rate was very high; 1,786 respondents completed the questionaire. The findings are contained in a report (*1*).

Highlights from Commuter Cycling in Ottawa-Carleton—a Survey (*1*) indicate the following:

- One-third of commuter cyclists are 40 years or older;
- 60 percent of all commuter cyclists have been cycle commuting for 5 years or less;
- From May through September, more than half of all commuter cyclists ride to work 11 days or more per month; more than 40 percent ride to work 16 days or more per month;
- A total of 75 percent of all commuter cyclists spend no more than 30 min riding to work;
- 95 percent of commuter cyclists have a driver's license, and almost 75 percent have access to a motor vehicle to get to work, yet they choose to go by bike;
- One-third of commuter cyclists use major roads for more than half of their commuting trip; one-third never use recreational pathways; and
- Approximately two-thirds of commuter cyclists list health and fitness as their primary reasons for cycle commuting; other reasons include convenience, economic reasons, environmental considerations, and pleasure.

Other questions elicited responses on preferences for improvements to the existing system to encourage cycling. Among the suggestions were

- Create bicycle-only routes,
- Improve maintenance,
- Connect different bicycle routes,
- Widen curb lanes,
- Reduce motor vehicle volumes,
- Improve bicycle parking,
- Install bicycle lights,
- Educate motorists and cyclists, and
- Provide rapid transit park and ride stations.

CONSTRUCTION OF BICYCLE FACILITIES

The city of Ottawa and RMOC have taken the following initiatives that build on the recommendations coming out of these surveys. Where consultants are employed, direction is given to consult with the cycling interest groups at the beginning of the project.

- One of these initiatives is the reconstruction of the Mackenzie King Bridge, which crosses the Rideau Canal. The bridge platform currently carries two lanes of transit plus four lanes for other motorized vehicles. The proposed redesign was arrived at through extensive consultation with users and focus groups. The result is a cross section that incorporates a wide median, two dedicated bicycle lanes, two lanes for transit, and two lanes for other motor vehicles. Effectively, two lanes that previously were used by automobiles are being given over to cycles.
- The core of Ottawa's downtown—Rideau Street—has undergone several facelifts in the past decade. The first major change was the establishment of a transit mall. Dedicated transit lanes, glass canopies, and a completely enclosed sidewalk area was hailed as a model of pedestrian comfort and transit efficiency. Automobiles were not permitted to use the roadway that was reserved for transit. The road continued to be signed "Bicycle Route," but in actual fact the cycling environment was less than friendly. Now, 15 years later, the mall portion has been demolished at the request of the merchants. The transit lanes remain but automobiles have been permitted to return. The bicycle route has been enhanced: cycles are allowed to ride in the center of the lane with the automobiles, and motorists are dissuaded from passing them. The street has several traffic-calming devices in effect, with the result that the operating speed of the cars has been lowered to that of the bicycles. This is a demonstration project and will be carefully monitored to determine its applicability to other locations.
- Several other major bridge reconstruction projects have been in the design phase for the past 2 years. Cycling facilities—wider curb lanes, dedicated cycling lanes, ramped staircases—have been included in the project design. The proponents of the projects have consulted the cycling interest groups at the beginning of the project with the result that the pieces of the network are being put into place even before the plan is prepared.
- A bicycle traffic light has been installed at an intersection with a straight-through prohibition for motorists. Signage, combined with the standard traffic light, indicate that the cyclist may proceed on the green signal. The lane approaching the intersection has

been striped to show a dedicated bicycle lane going straight through.

- An on-road bicycle parking program has been initiated in the city of Ottawa with the assistance of a private sector company. The firm, Cycle-Stop Displays, has donated approximately 800 two-cycle parking units to the city free of charge. Cycle-Stop installs and maintains the racks for the period of the initial pilot project. The program is paid for through advertising revenues from plates on the parking units. Whereas at one time the city would not have considered an advertising scheme, the merits and benefits of such a joint venture are obvious and have enabled Ottawa to move one step closer to its stated goal of providing better parking facilities for cyclists.
- Bicycle-exempt signs are being used throughout the region to permit cyclists to make turns (predominantly righthand turns) that motorists are not permitted to make during specified hours. The result is a bicycle network with fewer barriers.
- Bicycle lanes have been painted in several intersections where the volume of traffic or the complexity of the maneuvers is such that cyclists would benefit from a striped (dashed) line.
- All intersections on regional roads with sensor loops for traffic light control have been fitted with yellow dots to identify the most sensitive point on the loop. This enables cyclists to trigger the light sequence even though their bicycles do not carry as much metal as automobiles.
- In response to the request for a more truly intermodal system, Ottawa-Carleton Transport has developed several bike-and-ride facilities at some of its transitway stations. These have been inaugurated this year with more to follow at all new transit stations. The transit authority actively promotes these facilities in its pamphlets.

COMMUNITY INVOLVEMENT

Most governments have found that working with the people produces decisions that receive stronger support. To this end, cycling advisory groups have been established in five of the area municipalities within the past 3 years. The Ottawa Cycling Advisory Group is the oldest and has been actively involved in working on development projects and conducting independent research as necessary to assist the city departments. One of the major successes of this groups was the incorporation of cycling policies into the new official plan.

RMOC has established the Transportation Environmental Action Plan (TEAP) with input from both citizens and a staff resource group to recommend and implement projects designed to improve the transportation system for both cyclists and pedestrians. Since its inception, TEAP has developed guidelines for a demonstration bicycle parking station in the urban core, developed an intersection improvement pilot project, worked on traffic-calming guidelines, and recommended site-specific improvements to the cycling environment.

The transportation committee of RMOC recently endorsed a statement prepared by the Transportation Association of Canada that states the following, in part:

> Cycling is part of a total urban transportation system and, like walking, is healthy and environmentally friendly. Increased opportunities for safe cycling can best be achieved through urban and community plans, and through provision of facilities. Methods include:
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> - Cycle lanes on the public right-of-way and separate cycle networks;
> - The needs of cyclists considered in the preparation of community/neighbourhood plans;
> - Storage facilities at transit stations and on transit vehicles to encourage bike and ride;
> - Storage facilities in the downtown core, suburban town centres and other key locations;
> - Provision of cycle facilities as a condition of development. (*2*)

RMOC has taken this a step further by establishing a "green hierarchy" for transportation that ranks the various modes as follows: pedestrian, cyclist, transit, automobile, and other. This hierarchy has been applied to several major reconstruction projects with the result that pedestrian and cycling facilities are now included in the design. An example of this is the Mackenzie King Bridge reconstruction project.

Moving toward a society in which cycling is a viable alternative to other forms of transportation requires an integrated approach to engineering, encouragement, and education. This shift rarely happens overnight. Rather, the social engineering must be established just as the asphalt is laid. Role models play as large a part as do the physical facilities.

ROLE MODELS

In Ottawa, the police force has been using bicycles for 4 years. The officers are highly visible and very effective. City of Ottawa and RMOC staff use bicycles for business on a limited basis. "Blue bikes" have been available to staff at RMOC for 2 years on a voluntary basis. More recently, parking enforcement officers in the city of Ottawa began using bicycles to patrol their beat. In both cases, the results have been positive—no drop in productivity or efficiency and improved morale and fitness.

PLANNING FOR BICYCLES

The city of Ottawa, following the direction in the new official plan, began a comprehensive cycling plan 2 years ago. The city was joined by RMOC who wished to complete a cycling transportation network. The underlying premise of this joint study was to focus on utilitarian cycling and to develop predominantly on-road facilities.

Staff worked with consultants to develop route selection criteria, identify issues, and develop guidelines for facility design. The route selection focused on identifying a primary network that connected destinations across the region and a secondary network within the city of Ottawa that took the network planning down to a neighborhood level.

The city's plan includes sections on roadway design, pathway design, signage and maintenance, and parking standards as well as encouragement, education, and enforcement programs. The study team was composed of staff from five departments working with the Cycling Advisory Group. Several challenging recommendations have been put forward for Council's consideration. The plan, when approved, will likely be implemented over the next 10 to 15 years.

At the time that these two studies were initiated, NCC undertook a study entitled Integration of the Multi-Use Recreational

Pathways in the National Capital Region. This study recognizes, for the first time, the role that the recreational pathways play in providing linkages in the cycle commuting network. The coordination of these two studies has ensured that a fully integrated cycling network will be established.

The work of the earlier surveys in identifying the needs and user profile of cyclists laid the groundwork for these studies. Pilot projects have tested new techniques and design, while the development of policies has given cycling a solid place in the decision-making process. All of these components—research, planning, and implementation combined—will put Ottawa back on the map, not only for recreational cycling but also for nonrecreational cycling.

REFERENCES

1. *Commuter Cycling in Ottawa-Carleton—A Survey*. Department of Engineering and Works, City of Ottawa; Ottawa Cycling Advisory Group, Ontario, Canada, 1992.
2. *A New Vision for Urban Transportation.* Transportation Association of Canada, 1992.