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Halifax, Nova Scotia
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Halifax Regional Council
July 13, 2004

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY: 
Ken Reashor, P.Eng., Traffic Authority

DATE: July 5, 2004

SUBJECT: Traffic Calming Measures on Avenue du Portage

INFORMATION REPORT

ORIGIN

Halifax Regional Council meeting of May 18, 2004, item 9.2.1.

BACKGROUND

Councillor Warshick submitted a petition on behalf of residents of Avenue du Portage, Dartmouth requesting a three-way stop and crosswalk at the intersection of Avenue du Portage and Madeline Place.

DISCUSSION

Avenue du Portage is a minor collector roadway which begins at Caledonia Road ending approximately 1 km at the two schools. Recently a connection was completed between Madeline Place and Lexington Avenue (Keystone Village). A sidewalk exists on the west side.

A review of recent pedestrian and traffic volumes at this intersection indicates the minimum criteria is not met and therefore a three-way stop is not warranted. The traffic volume on Avenue du Portage is under 4000 vehicles per day, providing ample opportunity for pedestrians to make safe crossings.

Speed data indicates the 85th percentile speed, or that which 85% of drivers travel at or below, is 55 kph with an average speed of 40 kph. This shows general compliance with the posted speed limit of 50 kph.

Approval for a stop bar and crosswalk crossing Madeline Place has been given. This crosswalk will connect the existing sidewalk on the west side.

BUDGET IMPLICATIONS

There are no budget implications.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

ALTERNATIVES

There are no recommended alternatives.

Additional copies of this report, and information on its status, can be obtained by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by:



Karen MacQuarrie, Traffic Analyst, East Region, 490-4859



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TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY:

Ken Reashor, P.Eng., Traffic Authority

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SUBJECT: Residential Speed Limit Studies

INFORMATION REPORT

ORIGIN

This report was prepared by Traffic & Transportation Services to relay the findings of two residential speed limit studies to Regional Council.

BACKGROUND

In the past, Halifax Regional Municipality Public Works and Transportation (HRM) and the Nova Scotia Department of Transportation and Public Works (NSTPW) have received requests from Councillors and residents to have the speed limit reduced on their streets. Both departments wanted to determine the success or failure of other jurisdictions in reducing speed on local residential streets by reducing the speed limit.

Study 1

In July of 2003, HRM and NSTPW initiated a jointly funded consultant study to review the current practices of reducing speed limits in residential areas in jurisdictions across Canada.

The study consisted of a 'Best Practices' survey of Canadian jurisdictions to review current information on guidelines, criteria, procedures and effects of reducing speed limits in residential zones. The survey was comprehensive and considered the following information:

- **Roadway functional class and design** (street hierarchy, functionality, design requirements, capacity, traffic volumes, traffic flow, speed study data, noise measurements, vehicle classification data, traffic surveys, traffic control devices)
- **Planning requirements** (parking, school zones, transit routes, traffic calming measures)
- **Perceived problems** (speed, noise, high volumes, short-cutting, collisions, child safety problems, pedestrian/cyclist problems)
- **Speed limit reduction method applied** (including any accompanying speed reduction measures)
- **Public relations** (public support/opposition, educational requirements)
- **Safety performance** (change in collision/incident occurrence)
- **Regulatory authority** (does the province or municipality set speed limits?)
- **Enforcement and emergency response issues** (several police agencies were contacted for comment)
- **Cost/funding**
- **Environmental concerns**
- **Operations** (implications/impact of speed reduction method)

The study surveyed Yellowknife, NT, Corner Brook, NL, Iqaluit, NU, Nelson, BC, Moncton, NB, Moose Jaw, SK, Red Deer, AB, Wellington, ON, Calgary, AB, Hamilton, ON, Toronto, ON, Ottawa, ON, Halifax, NS and the Province of Alberta.

Study 2

In June of 2003, Chebucto Community Council submitted a request to the Minister of Transportation & Public Works to reduce the speed limit from 50 kph to 30 or 40 kph on roadways in Clayton Park and Rockingham. According to the Nova Scotia Motor Vehicle Act (Section 104 (1)), municipalities cannot post speed limits below 50 kph on residential roadways without special permission of the Provincial Traffic Authority or the Provincial Minister of Transportation and Public Works. In letters dated June 27, 2003 and July 7, 2003, Minister of Transportation Michael Baker authorized the HRM Traffic Authority to post a speed limit of 30 to 40 kph on the following sections of highway:

1. Bayview Rd. from Lacewood Dr. to the Bedford Hwy.
2. Flamingo Dr. from Knightsbridge Dr. to the Bedford Hwy.
3. Gateway Rd. from Lacewood Dr. to Bayview Rd.
4. Meadowlark Cres. from Lincoln Cross to Flamingo Dr.

Skylark Street was initially omitted in error but was later added.

These roadways were approved for reduced speed limits on a trial basis only so that the results could be examined as part of the joint study undertaken by HRM and NSTPW on the effect of posting speed limits less than 50 kph.

DISCUSSION

Study 1

Selection of an appropriate maximum posted speed limit on residential streets is a contentious issue of great public interest. A common misconception is that lowering the posted speed limit will decrease travel speeds and increase safety. The review of technical sources and Best Practices survey revealed that this is not the case.

The findings of the Best Practices survey (December 2003) and information provided by police agencies as part of the consultant study lead to the following conclusions:

- The majority of Speed Zone reviews are undertaken in a reactive manner to requests from residents, internal department and councillors. Very few jurisdictions undertake Speed Zoning reviews pro-actively
- Larger jurisdictions are more inclined to have a formalized system to handle the volume of complaints and requests
- Smaller jurisdictions are more inclined to dismiss complaints (i.e., refer complainants to the local bylaw or statutory legislation) or refer the complaint to the local police authority
- On existing roads, smaller jurisdictions typically rely on technical judgment or default speed limits in establishing Speed Zones while medium and larger jurisdictions are more inclined to undertake a detailed engineering study which often utilizes a modified 85th percentile approach
- On new roads, most jurisdictions cited 'design speed' and 'roadway classification' as the main criteria in establishing speed limits
- Changing the posted speed limit on residential roads to reduce operating speeds produce negligible results without heavy enforcement
- Speed limit reductions driven by political decisions are less likely to be successful than those driven by engineering decisions
- Several jurisdictions either do not reduce speed limits or actively avoid reducing speed limits
- The use of 40 kph warrants for residential streets is becoming more common in Ontario when accompanied by traffic calming measures.
- 'Increased enforcement' was cited as the most common method of supplementing speed limit reductions
- Community Safety Zones and Reduced Speed School Zones are not effective in reducing operating speeds without additional enforcement; and

According to the consultant study, most Police agencies are of the opinion that speed limit changes, without increased enforcement, will have a negligible impact on operating speeds. Police agencies, however, have limited resources to apply to speed limit enforcement. Police prefer a properly set speed limit based on good engineering principles.

Study 2

Prior to the installation of the 40 kph maximum speed signage on September 4, 2003, Traffic & Transportation Services conducted speed surveys on the affected roadways. Both the 85th percentile speed and the average speed were recorded as part of these surveys. The 85th percentile speed is the

speed at or below which 85 percent of the motorists drive on a given roadway. This speed indicates the speed that most motorists on the road consider safe and reasonable under ideal conditions and is a widely-used guideline for the appropriate speed limit for that road. The results of the 85th percentile and average speed studies prior to the reduction of the speed limit are indicated as 'BEFORE' in the table below.

To determine the effects of reducing the speed limit to 40 kph, Traffic & Transportation Services conducted similar speed studies in both October, 2003 and February 2004. The results of these surveys are also presented in the table below. To reduce data bias, the Halifax Regional Police were asked not to administer additional enforcement above the regular level of enforcement for this area.

Speed Survey Results

STREET	DIRECTION	BETWEEN STREETS	85% kph BEFORE	85% kph Oct. 2003	85% kph Feb. 2004	Average Speed BEFORE	Average Speed Oct. 2003	Average Speed Feb. 2004
FLAMINGO DRIVE	E/B	DOVE ST. & MEADOWLARK CRES.	51	49	50	44	40	45
FLAMINGO DRIVE	W/B	DOVE ST. & MEADOWLARK CRES.	51	47	54	42	37	49
FLAMINGO DRIVE	E/B	EAST OF ORIOLE ST.	40	39	46	35	32	41
FLAMINGO DRIVE	W/B	EAST OF ORIOLE ST.	50	37/39	47	41	24/30	41
BAYVIEW ROAD	E/B	WEST OF LOOK OFF	54	59	53	47	50	48
BAYVIEW ROAD	W/B	WEST OF LOOK OFF	53	45	58	44	39	49
BAYVIEW ROAD	E/B	AT / NEAR WOODBANK TERR.	54	55	54	48	47	48
BAYVIEW ROAD	W/B	AT / NEAR WOODBANK TERR.	51	54	52	45	46	46
GATEWAY ROAD	E/B	LAURENTIDE DR. & SCARLET ROAD	50	51	51	44	44	45
GATEWAY ROAD	W/B	LAURENTIDE DRIVE & SCARLET ROAD	47	51	51	41	44	43
MEADOWLARK CRESCENT	E/B	EAGLE CRESCENT & LINCOLN CROSS	51	54	48	44	43	42
MEADOWLARK CRESCENT	W/B	EAGLE CRESCENT & LINCOLN CROSS	54	52	48	45	41	43

To assist during the trial period for this project, Halifax Regional Police instituted special checks to conduct radar enforcement and monitor traffic patterns. Since August of 2003, these special checks were deployed sixteen (16) times. In addition, a radar trailer was deployed on these streets, both before and after August, to document speeds during various times of the day.

According to Halifax Regional Police (email of March 24, 2004), the results of these efforts indicate that the implementation of reduced speed limits had little effect on the traffic patterns. For example, the average speed for the 85th percentile of traffic on Bayview prior to August 2003, was 57.5 kph. After August, the average was 54.7 kph.

Police reported that radar/traffic enforcement resulted in the following tickets issued:

Flamingo/Meadowlark:

Six (6) Speeding
Sixteen (16) Other

Bayview/Gateway:

Zero (0) Speeding

Twelve (12) Other

In the same email, Halifax Regional Police indicated that in the preceding fourteen months, there had been a total of five (5) motor vehicle collisions on Flamingo Drive. For the same period there was a total of nineteen (19) collisions on Bayview Drive, with four (4) collisions involving an injury. Sixteen (16) of the nineteen (19) collisions occurred at the intersections of Bayview Drive with Lacewood Drive and the Bedford Highway. There was no indication that the reduced speed limit had any bearing on the incidence of motor vehicle collisions on these streets.

The survey results and police reports indicate that the reduced speed limit on Flamingo Drive, Bayview Road, Gateway Road, Skylark Street, and Meadowlark Crescent had a negligible effect on operating speeds. The Province has since asked that HRM remove the 40 kph speed zones on these roadways. Signage will be changed during the month of July 2004.

BUDGET IMPLICATIONS

There are no budget implications.

FINANCIAL MANAGEMENT POLICIES / BUSINESS PLAN

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ALTERNATIVES

There are no recommended alternatives.

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Report Prepared by: Erica Copeland, P.Eng., Transportation Engineer, 490-5525