



Corporate Report

NO: C006

COUNCIL DATE: May 15, 2006

COUNCIL-IN-COMMITTEE

TO: Mayor & Council DATE: May 11, 2006
FROM: General Manager, Engineering FILE: 5460-90
SUBJECT: Traffic Calming Status Update, Future Budget Needs & Policy Amendment

RECOMMENDATIONS

It is recommended that Council:

1. Endorse the Practices and Procedures, as listed in Appendix 2;
2. Direct staff to monitor and report to Council in 2 years on traffic calming on collector roads in respect to concerns about the effect on mobility, displacement of traffic to surrounding local roads and increased response times by emergency services.

INTENT

To provide a status update, advise of funding needs and present an updated policy for the City's traffic calming program.

BACKGROUND

City Council approved a traffic calming policy in May 1997. However, only a small number of traffic calming projects were actually constructed as there was a modest budget and not many locations qualified. Since that time, the policy has been amended on three occasions: February 1999, July 2000 and September 2004.

To help address the funding issue, the 1999 amendments allowed for 100% resident funding of approved traffic calming devices where City criteria were not met.

The 2000 amendments eased the criteria to increase the number of projects qualifying; however, the budget was not increased and thus the number of projects constructed was still limited.

The 2004 amendments eased the criteria further, which combined with special funding of approximately \$1.3 million over 2004 and 2005 enabled the City to approve the

implementation of 27 projects contained within two construction packages. Ten of these projects have now been completed with construction started on another six. However, there is still a significant backlog of projects that are ready to proceed but are awaiting funding. Several others, which meet the City’s qualifying criteria, will be sent out for the residents review and input but will likewise have to await funding.

There is presently approximately \$0.5 million available for new projects in the traffic calming program for 2006.

DISCUSSION

The demand for traffic calming has been steadily increasing, which is likely a combination of resident awareness of the program and the high level of growth in Surrey. This demand has resulted in a significant waiting period for traffic calming projects that the City is supporting for implementation.

The following table summarizes evaluation results of requests to date.

Table 1: Summary of the Evaluation of Traffic Calming Requests

Total number of traffic calming petition/requests received to date	107
Total number of requests qualified or expected to qualify for calming	61
Number of requests not meeting criteria or minimum public support	46

A list of projects constructed or under construction is included in Appendix 1.

Funding Needs for Traffic Calming

Table 2: Historic and Current Calming Funding Needs (Existing Criteria)

Number of Projects	Project Status	Estimated Costs \$ Million
8	Projects Completed	\$0.6
19	Projects Under Construction	<u>\$0.65</u>
27	Subtotal for 27 projects already funded	\$1.25
12	Qualified Projects	\$1.1
18	Projects in Design Process (inc. Fraser Heights)	\$2.3
4	Projects under evaluation (Value expected to be approved)	\$0.2
	Projected Additional Approved Projects to end of 2006	<u>\$0.5</u>
34	Subtotal for 34 projects yet to be funded	<u>\$4.1</u>
61	Total for all 61 projects	\$5.35

Table 2: illustrates the investment in traffic calming undertaken so far and that the future shorter term demands and costs are high. Tightening the criteria for approving projects and not promoting collector road traffic calming would reduce the number of eligible projects and costs. If the proposed new criteria had been in effect previously the number

of projects meeting criteria and the cost would have been reduced to approximately \$4.35 million as opposed to \$5.35 million.

After utilizing the current budget of \$1.8 million, a shortfall of approximately \$3.55 million remains for projects qualified, and expected to qualify.

Future Funding Sources

As the need for traffic calming is primarily a result of City growth and ongoing development, the new 10-year plan allows for traffic calming with a component funded by growth and a component funded by general revenue to a total annual need of \$1.0 million.

An annual budget of \$1.0 million for traffic calming would allow the City to construct in the order of 15 to 20 projects per year thereby removing the current backlog of projects within three years. It is difficult to accurately predict future demand for traffic calming but it is likely to grow in proportion to City growth. Funding for traffic calming will be further reviewed as part of the next 10 Year Plan review.

Fraser Heights Area Traffic Calming Plan

In 2005, the City developed an area wide traffic calming plan for the Fraser Heights area to comprehensively respond to the numerous requests for traffic calming from individual streets and neighbourhoods within the area. The value of the proposed traffic calming is estimated to be approximately \$1.3 million. A separate report on the scope of this project, funding implications and possible phasing of implementation is being submitted for Council consideration in conjunction with this report.

Traffic Calming as Part of Land Development Servicing

For the past number of years, traffic calming has been incorporated into new development with measures such as speed humps on lanes longer than 100 m and the use of curb extensions (bulges) to narrow roads at intersections and pedestrian crossing locations.

In order to be proactive and reduce the costs of the traffic calming program further, traffic calming is being integrated in all new NCP's and funding and/or construction of traffic calming measures is being undertaken in conjunction with new development.

Proposed "Wait and Monitor Period" on Traffic Calming for Collector Roads

Further use of traffic calming measures such as speed tables and chicanes on collector roads, which are specifically designed to physically reduce vehicle speeds, is not recommended. The use of curb bulges and roundabouts would continue to be available for use on such streets. There are concerns regarding the implementation of hump and chicane traffic calming on collector roads because of the intended function of these roads. The intent of collector roads is to connect local roads and other collector roads to arterial roads while also providing direct access to homes and businesses. The four key concerns are:

1. Due to the reduced comfort associated with traffic calming (primarily vertical deflections) many drivers will choose to avoid these streets and instead work their way through to arterials via local roads that do not have traffic calming; hence displacing more traffic to local roads.
2. 50 km/h is considered an appropriate speed limit along collectors as they are intended to accommodate mobility for City residents. Traffic calming measures generally slow traffic to 30-40 km/h. Even though calming measures can be designed to reduce speed to 50 km/h, the inconvenience and discomfort of the features can still encourage some drivers to use alternative and sometimes less suitable routes.
3. Slowing to 30 to 40 km/h for traffic calming measures significantly lowers the roads' capacity, which would be problematic for higher volume collector roads.
4. Collector roads are generally important routes for emergency services and have been designed to accommodate transit vehicles. The traffic calming measures have a negative impact on transit vehicles due to wear on the vehicle and passenger comfort. More importantly, it is estimated that each measure increases emergency services response time by 10 seconds, making it difficult to achieve the response times required of them. The introduction of traffic calming more broadly on collector roads could ultimately contribute to the need for new Fire Halls at considerable cost to the City and taxpayers.

A survey of nine other Lower Mainland municipalities revealed that all but one allowed limited traffic calming (curb extensions, medians and traffic circles) on minor collector roads. None permitted vertical deflections.

Due to high demand for traffic calming (including vertical deflections) on collector roads, staff has concluded that an evaluation of the effects related to the installation of traffic calming on collector roads would be appropriate. Traffic calming on 5 collectors in Fraser Heights and 14 collectors throughout the rest of the City have been, or will be, constructed. The locations could serve as a "pilot". This includes all locations that have been identified to residents as "approved for construction" or "in design process". The exception is 20 Avenue from 128 Street to 152 Street. This has been identified by the Fire Department as a key emergency response route and is considered inappropriate for this type of traffic calming.

It is recommended that a "monitoring" period be established with respect to the traffic calming on the "pilot" collector roads. A thorough assessment of these 'test' projects will be undertaken. An evaluation period of at least 2 years is necessary to gather data for analysis. This approach would be applied with some flexibility for example to sections of collector roads fronting elementary schools and playgrounds and the use of curb bulges would continue where appropriate.

Proposed Traffic Calming Practice and Procedure Amendments

The following amendments to the criteria are recommended to ensure measures are implemented where the need and desire is highest and to help control the costs of future

traffic calming. Indicated changes are in bold.

- ***A minimum 50% response rate and 60% support from the respondents for proposed traffic calming plans is required for the approval of construction. Residents will be permitted to reapply 1 year after the rejection date but cannot apply more than 2 consecutive years in a row.***

This will ensure the majority of the residents support the project and that public funds are being spent in the neighbourhoods with high desire for it. These criteria are currently being applied but the policy had not been updated to reflect this.

- *15% of traffic (85th percentile speed) is traveling more than **10 km/h** over the speed limit.*

There is a wide range of speeds used in other jurisdictions and no accepted standard. Increasing the minimum to 10 km/h from the present criteria from 7 km/h over the speed limit is a more reasonable benchmark and will focus available funding on the roads with more significant speeding issues.

The amended Traffic Calming Practice and Procedure is attached as Appendix 2. A priority scoring system has also been developed to help staff objectively prioritize construction of projects. This is attached as Appendix 3.

Traffic Calming Design

Against the background of growing demand for traffic calming, staff's approach has been to maximize the number of projects implemented with the funds available. Although the opportunity is increasingly available to integrate traffic calming within broader construction projects through development, very often, traffic calming takes the form of "retro-fitting" to an existing road. With the required signing and pavement markings needed to make sure they operate safely, these projects can sometimes be visually intrusive.

The more common and often most effective forms of traffic calming, such as speed humps, do not offer significant opportunities for streetscape enhancement although staff take every opportunity to do this by constructing well designed and quality projects. For example, all new traffic circles in the City are designed to permit planting and landscaping within the centre circle median. However, a landscaped traffic circle can cost up to approximately \$60,000. For the same amount of money, two or three other calming projects along entire streets could potentially be delivered with other forms of traffic calming.

CONCLUSION

The number of requests for traffic calming has increased considerably in recent years due to public awareness and continued development in Surrey. High demand for traffic calming is expected to continue as more residents become aware of the program, development continues and traffic volumes increase. There is a large backlog of projects

either awaiting funding or, which meet the City's qualifying criteria, and are proceeding through public consultation.

Based on the above discussion, it is recommended that:

- the Traffic Calming Practice and Procedure be amended to require a minimum 50% response rate from affected property owners, a minimum traffic volume of 500 vehicles per day and an 85th percentile vehicle speed on the street of more than 10 km/h over the speed limit;
- traffic calming be implemented on the approximately 19 collector roads already identified in the program in order to evaluate their effect; and
- other than the above 19 projects no further traffic calming, such as speed tables or chicanes, be installed on collector roads (except elementary school and playground frontages), pending completion of a 2-year monitoring and evaluation process on the traffic calmed 'test' collector roads.

Paul Ham, P.Eng.
General Manager, Engineering

MD/PH/VL/JB/AUS/PB/brb
Attachment

APPENDIX 1

Status of Traffic Calming Program (Collector roads highlighted in Bold)

The City has implemented traffic calming measures on:

- 156 A/B Street (32 Avenue to 40 Avenue)
- 34 Avenue (Rosemary Heights Drive to 156A Street)
- **126 Street (88 Avenue to 96 Avenue)**
- 28 Avenue (192 Street to 196 Street),
- Boundary Park Area (including **Boundary Drive East**)
- **121 Street (62 Avenue to 64 Avenue)**
- 74 Avenue (East of 130A Street)
- Three lanes

The cost of these projects is approximately \$630,000.

As part of a current construction package, work is currently underway on:

- Southmere Crescent (Phase 1)
- North West Whalley (Phase 1)(**including 111 Avenue**)
- **84 Avenue (164 Street to 168 Street)**
- Goldstone Park (58 Avenue and 146 Street frontages)
- 157 Street (98 Avenue to 100 Avenue)

The next projects to be constructed are:

- 152A Street (88 Ave to Fleetwood)
- **54 Avenue (184 – 188 Street)**
- **125A Street (Station – 56 Avenue)**
- **82 Avenue (162 – 164 Street)**
- Nine lanes

The total contract value is approximately \$650,000.