



**NEIGHBOURHOOD TRAFFIC CALMING
PROGRAM AND PROCEDURES
NORTH VANCOUVER, BRITISH COLUMBIA**

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EXECUTIVE SUMMARY

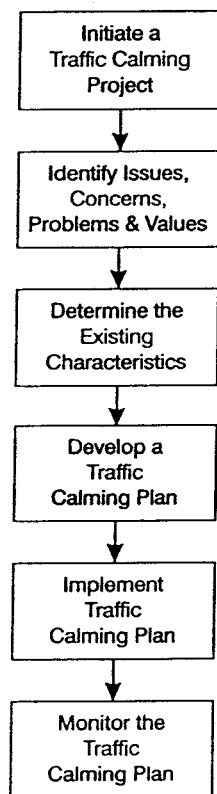
The District of North Vancouver is committed to maintaining and enhancing neighbourhood livability, retaining desirable characteristics of each neighbourhood and encouraging community-based solutions and decision making. This is evident by the mission statement of the District of North Vancouver, "**We serve our community by providing leadership and outstanding services that maintain and enhance the quality of life for the residents of today and tomorrow.**"

Consequently, the District of North Vancouver employs a public involvement process to develop Traffic Calming plans for neighbourhoods which may be experiencing negative impacts from motor vehicle traffic. Traffic Calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorized street users. Traffic Calming can be installed as a retrofit improvement to an existing neighbourhood or in newly constructed neighbourhoods as a design feature.

The District of North Vancouver has an integrated hierarchy of streets. The streets are classified as arterial, collector or local roads. Sometimes motorists can develop a pattern of using a street in a manner which was not intended, such as using a local road as a through route or traveling at excessive speeds. The purpose of traffic calming is to restore streets to their intended function and correct motorist behaviours to acceptable community norms.

The need for a traffic calming project can be identified either from studies by staff or directives from Council in pursuit of safety and operational objectives of the District. It can also be identified through requests from residents who perceive traffic operations are negatively impacting the quality of life in their neighbourhood. Residents often have a greater knowledge of traffic problems in a neighbourhood than the District. The residents have opportunity to observe traffic in the neighbourhood over extended periods, where as the District must rely on short duration observational surveys which only provide a snapshot of the situation.

The Traffic Calming Process involves public participation and group decision making to find solutions to concerns a neighbourhood may have about the negative effects of motor vehicle traffic. The Traffic Calming Process is an orderly process which is comprised of six basic steps. The steps are shown in FIGURE ES-1.



**FIGURE ES-1 TRAFFIC CALMING
FLOW CHART**

A public awareness program will accompany each traffic calming project. Adequate advice to local and through traffic will be provided prior to the implementation of any traffic calming project.

Traffic calming projects can be implemented in three ways:

- trial or temporary installation;
- staged or phased installation;
and
- full or permanent installation.

The District conducts a performance review of installed traffic calming plans. The review considers the operational, social and sometimes environmental aspects of the traffic calming installations.

1.0 INTRODUCTION

1.1 Commitment to Improving Neighbourhood Livability

The District of North Vancouver is committed to maintaining and enhancing neighbourhood livability, retaining desirable characteristics of each neighbourhood and encouraging community-based solutions and decision-making. This is evident by the mission statement of the District of North Vancouver, which is "We serve our community by providing leadership and outstanding services that maintain and enhance the quality of life for the residents of today and tomorrow." In addition, the following three Governance Principles of the District also articulate these values.

- "We serve our community best by facilitating community-based solutions wherever possible. This enables us to be more effective in prioritization and allocation of available resources and more responsive to those affected by local government decisions."
- "We try to retain the desirable characteristics of each neighbourhood and the community as a whole by balancing and managing growth and change, recognizing that the community needs also change over time."
- "We believe that open and responsive local government occurs through decision-making processes that recognize the diversity of backgrounds, interests and views in our community and are accessible to those wishing to participate, easily understood, timely, just and fair."

It is for these reasons that the District of North Vancouver is employing a public involvement process to develop Traffic Calming plans for neighbourhoods which may be experiencing negative impacts from motor vehicle traffic.

1.2 What is Traffic Calming

Traffic Calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorized street users. Traffic Calming can be installed as a retrofit improvement to an existing neighbourhood or in newly constructed

neighbourhoods as a design feature. The goals of Traffic Calming include:

- increasing the quality of life;
- incorporating the preferences and requirements of residents;
- creating safe streets;
- creating attractive streets; and
- promoting pedestrian, cycle and transit use.

Traffic Calming measures will include:

- vertical changes in the street (speed humps, speed bumps, speed tables, raised intersections);
- lateral changes in the street (chicanes, offset intersections, lateral shifts, traffic circles);
- constrictions (narrowings, pinch points, islands, parking);
- narrow pavement widths;
- entrances features (gates, signs, narrowings, surface treatments); and
- route changes (road closures, partial road closures, diverters, turn restrictions)

All selected Traffic Calming measures will be in accordance with the Canadian Guide to Neighbourhood Traffic Calming, by the Transportation Association of Canada and Canadian Institute of Transportation Engineers.

1.3 Why is Traffic Calming Needed

The District of North Vancouver has an integrated hierarchy of streets. The streets are classified as arterial, collector or local roads. The road classification designates the intended function of the street. The function of an arterial road is to carry trips of longer duration and through traffic, and also to accommodate significant volumes of traffic. The function of a collector road is to collect and distribute traffic into and out of a neighbourhood, and provide property access. The function of a local road is to provide property access.

Sometimes motorists can develop a pattern of using a street in a manner which was not intended, such as using a local road as a through route or traveling at excessive speeds. The purpose of traffic calming is to restore streets to their intended function and correct motorist behaviours to acceptable community

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norms. For new land developments, the District may foresee a potential for the misuse for streets and direct traffic calming measures to be installed as a requirement of development. The overall objectives of traffic calming include:

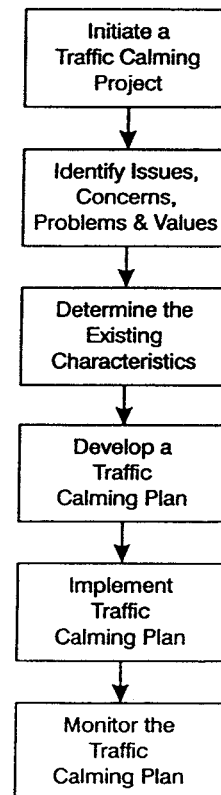
- achieving slower speeds for motor vehicles;
- reducing collision frequency and severity;
- increasing safety for non-motorized users of the street;
- reducing the need for police enforcement;
- enhancing the street environment;
- increasing access to all modes of transportation; and
- reducing through motor vehicle traffic.

Traffic calming measures would generally only apply to local roads which are not bus routes or major emergency routes in the District of North Vancouver.

1.4 The Traffic Calming Process

The Traffic Calming Process involves public participation and group decision making to find solutions to concerns a neighbourhood may have about the negative effects of motor vehicle traffic. The Traffic Calming Process is an orderly process which is comprised of six basic steps. The steps are shown in FIGURE 1.1.

These steps will be discussed in greater detail in the remaining chapters of the report. In addition, a detailed people-coordinate flowchart of the planning process is included as APPENDIX C.



**FIGURE 1.1 TRAFFIC CALMING
FLOW CHART**

1.5 Purpose and Content of this Report

The purpose of this report is to outline the policies for Neighbourhood Traffic Calming in the District of North Vancouver. The report contains five chapters:

- Chapter 1 Introduction
- Chapter 2 Programming
- Chapter 3 Planning Process
- Chapter 4 Financing the Initiative
- Chapter 5 Implementation and Performance Monitoring

Chapter 1 defines traffic calming and discusses why traffic calming is needed in the District of North Vancouver.

Chapter 2 describes the selection process for the neighbourhood traffic calming program and the roles of the neighbourhood, District staff and Council in the process.

Chapter 3 outlines the steps of the traffic calming planning process from identifying and quantifying issues and concerns to inclusion in the District's capital works budget.

Chapter 4 describes the various methods through which traffic calming initiatives can be funded.

Chapter 5 discusses implementation, including public awareness, installation options and post performance evaluation.

2.0 PROGRAMMING

2.1 Initiating Traffic Calming Projects

The need for a traffic calming project can be identified either from studies by staff or directives from Council in pursuit of safety and operational objectives of the District. It can also be identified through requests from residents who perceive traffic operations are negatively impacting the quality of life in their neighbourhood.

2.2 Preliminary Screening and Verification

Requests for traffic calming will be subjected to a preliminary screening. The screening will use a minimum threshold and scoring procedure. The scoring will be based on the criteria shown in TABLE 2.1.

TABLE 2.1 PRELIMINARY SCORING

CRITERIA	POINTS	BASIS FOR POINT ASSIGNMENT
Speed	0 to 25	85 th percentile traffic speeds more than 5 km/h above the posted limit. (5 points for every kph)
Volume	0 to 25	Average daily traffic volumes (1 point for every 100 vehicles)
Total Points Possible	50	

Traffic calming requests with a preliminary scoring of less than 25 points will not be considered. Candidate traffic calming projects will be prioritized for funding consideration by Council during the annual budget setting process.

In addition, a survey will be sent to all households and businesses in the study area. The survey will verify if there is sufficient support in the study area for a traffic calming study. At least 50 percent of the surveys must be returned and a majority of the responses must support a traffic calming study for the request to proceed to budget consideration.

Candidate traffic calming projects will be assessed to determine a priority relative to other requests for traffic calming. The assessment will consider the following criteria:

- safety performance (collisions, collisions involving speed, perceived risk and exposure);
- traffic characteristics (traffic volume, percent through traffic, road classification, pedestrian volume and cyclist volume);
- physical characteristics (road width, alignment, pedestrian and cyclist facilities, parking facilities, sensitive frontages such as schools, playgrounds, store fronts); and
- environment (traffic noise, ambient noise, number of residents affected, setback of houses).

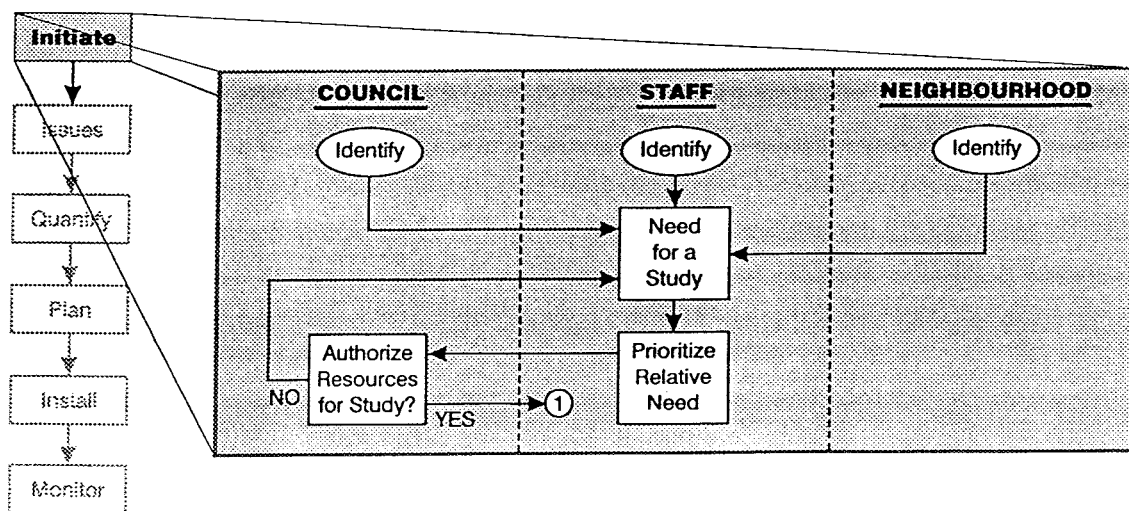


FIGURE 2.1 INITIATING A TRAFFIC CALMING PROJECT

2.3 The Role of the Neighbourhood

The neighbourhood residents will be involved in the problem identification and the decision making processes related to the existing and future management of traffic in their neighbourhood. The key responsibilities of the neighbourhood are to:

- attend the organized public meetings for traffic calming studies;
- identify traffic related issues in the neighbourhood;
- select from the options presented by staff, traffic calming concepts which address the identified issues;
- choose a preferred traffic calming plan or course of action; and
- consider local improvement initiatives or specified area bylaws where applicable.

2.4 The Role of District Staff

The District staff will prepare an assessment of potential traffic calming projects for presentation to Council prior to the budget deliberations for the coming year. Once Council has approved the budget and authorized selected traffic calming projects to proceed, staff will schedule and conduct the neighbourhood public processes. The key responsibilities of staff are:

- develop terms of reference of the study;
- develop and manage a public participation process;
- facilitate the study process (may use outside facilitator for meetings);
- define and quantify the nature and extent of traffic issues through discussions, perception surveys and data collection;
- provide expertise and advice to generate possible solutions (may use outside consultant);
- facilitate a consensus building exercise with the neighbourhood to discern a preferred solution or course of action;
- communicate the status and outcome of the study process to Council;
- prepare budget submissions of Council endorsed traffic calming initiatives;
- prepare and conduct a public awareness campaign; and
- implement and monitor Council approved traffic calming projects.

2.5 The Role of Council

Council will direct the traffic calming program at a strategic level. The responsibilities of Council are:

- based on an assessment from staff, approve funding and resource allocations in the annual budget to conduct traffic calming studies in selected neighbourhoods;
- review and consider the preferred traffic calming plan initiatives as chosen by the neighbourhoods;
- forward Council endorsed traffic calming initiatives to the annual budget deliberations for consideration;
- allocate funding for selected traffic calming initiatives in the annual capital budget; and
- review performance of implemented traffic calming projects.

3.0 PLANNING PROCESS

3.1 Understanding the Concerns of the Neighbourhood

Residents often have a greater knowledge of traffic problems in a neighbourhood than District staff. The residents have opportunity to observe traffic in the neighbourhood over extended periods, where as staff must rely on short duration observational surveys which only provide a snapshot of the situation. For this reason, it is important for staff to conduct opinion surveys and meet with the residents to gain a full understanding of the issues, concerns and values of the neighbourhood. From this understanding, staff can derive a list of objectives for developing a traffic calming plan which will meet the aims of the neighbourhood.

For very large neighbourhoods, the District may elect to appoint a traffic advisory committee to represent the neighbourhood in a traffic calming study. The committee members would be chosen from those individuals indicating a willingness to serve in this capacity from the responses to a social information survey of the neighbourhood. The area of the study can be a single street, if the concerns are related to excessive speeds, or a whole neighbourhood bounded by arterial and collector roads, if the concerns are related to traffic infiltration.

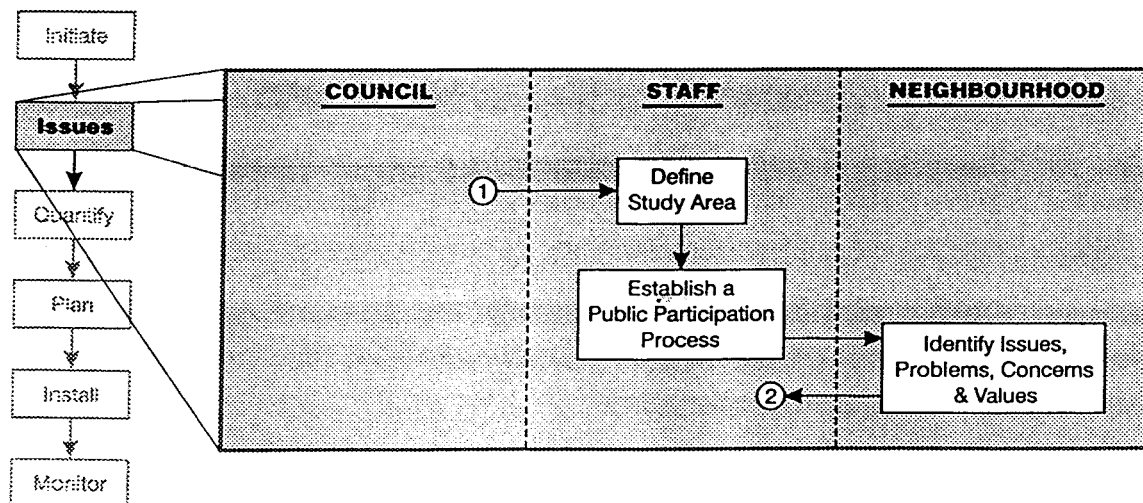


FIGURE 3.1 IDENTIFYING ISSUES AND CONCERNS

3.2 Quantifying Existing Conditions

Obtaining information about the existing conditions in the neighbourhood is important for the preparation and evaluation of traffic calming plans. This information is required for:

- defining or quantifying the seriousness of the problems;
- developing a plan of appropriate countermeasures; and
- performing "before and after" evaluations of the traffic calming plan.

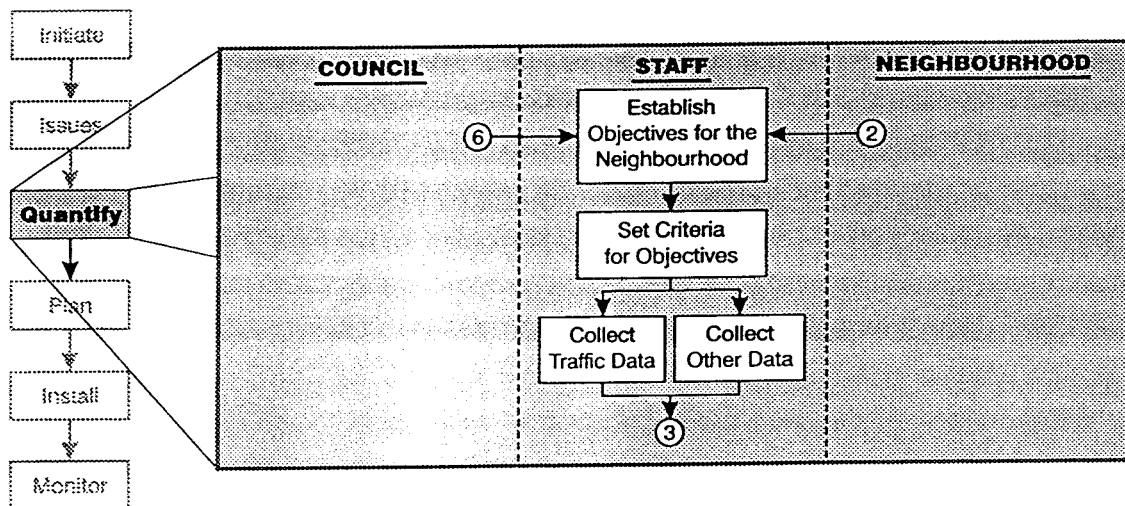


FIGURE 3.2 QUANTIFYING EXISTING CONDITIONS

The type of information collected will vary with the problems and concerns identified by the neighbourhood and the possible remedial measures proposed. The information is usually of three types:

- operational;
- social; and
- environmental.

A. Operational Data

This data relates to the operating characteristics of the neighbourhood traffic. The data set usually includes some or all of the following information:

- traffic volumes - 24 hour two-way mid-block traffic volumes and/or peak period turning movement counts at intersections;
- traffic composition by vehicle types;
- collision history - records from ICBC;
- origin and destination surveys;
- traffic generation from existing and/or proposed developments;
- travel time and delay surveys;
- through traffic surveys;
- pedestrian and cyclist desire lines;
- parking surveys; and
- traffic speed surveys.

B. Social Data

Social information is needed to measure people's perceptions of the traffic issues, recent changes and impacts of proposed developments or improvements. This information can be obtained by surveys. However, the extent to which surveys are needed will decrease with increasing levels of public participation as the information would be obtained during the process. Therefore, surveys for social information would likely only be used for processes which utilize an advisory committee made up of representatives from the different areas of very large neighbourhoods. Typical social information which is required for traffic calming studies includes:

- age distribution;
- proportion of rental accommodation;
- level of residential mobility;
- usage patterns of local facilities, such as schools, parks and open space;
- willingness to serve on an advisory committee; and
- perceptions of traffic related impacts and needs, such as noise, safety and mobility.

C. Environmental Data

Environmental data would be obtained to meet a specific identified need for the neighbourhood and may not be required for all traffic calming studies. Environmental data includes:

- noise measurements - typically "before and after";
- air quality measurements;
- inventory of existing features, such as vegetation, trees, structures and adjacent land use; and
- road widths, location of accesses, pedestrian and cyclist facilities.

3.3 Developing the Solution Spectrum

District staff and consultants(if applicable) in consultation with the residents, the transit authority, and emergency services will formulate alternative traffic calming plans for the neighbourhood. The traffic calming plans will consider the objectives of the neighbourhood, accessibility needs, safety and environmental standards. The spectrum of solutions should be as diverse as possible, providing high and low cost options and satisfy varying degrees of the neighbourhood objectives. Each alternative solution will include a statement of the effectiveness of meeting the objectives of the neighbourhood, any disbenefits to the neighbourhood, total project cost, annualized cost to the benefiting properties (if applicable) and the impacts to the larger community. All Traffic Calming measures will comply to the Canadian Guide to Neighbourhood Traffic Calming, by the Transportation Association of Canada and Canadian Institute of Transportation Engineers.

3.4 Discerning a Preferred Solution

District staff will facilitate meetings for the residents to discuss the alternative traffic calming plans. At the meetings, District staff will present the range of solutions, provide the participants with information about each alternative and a relative comparison. The meetings will use group decision making techniques to encourage consensus building toward the selection of a preferred solution or course of action. Support for the preferred solution will be verified by a survey of households and businesses in the study area.

3.5 Council Consideration of Initiative

Once a neighbourhood has selected a preferred traffic calming plan, staff will submit a report to Council on behalf of the neighbourhood. Council will consider the proposed neighbourhood traffic calming plan and either endorse or reject the plan. Council may reject the plan in one of two ways:

- either refer the plan back to the process for developing a new option;
- reject the plan outright and end the process.

If Council endorses the plan, it will be forwarded to the annual budget deliberations so that Council can consider funding the plan comprehensively with other funding needs of the District. If Council approves funding, then the plan will be implemented as part of the capital program.

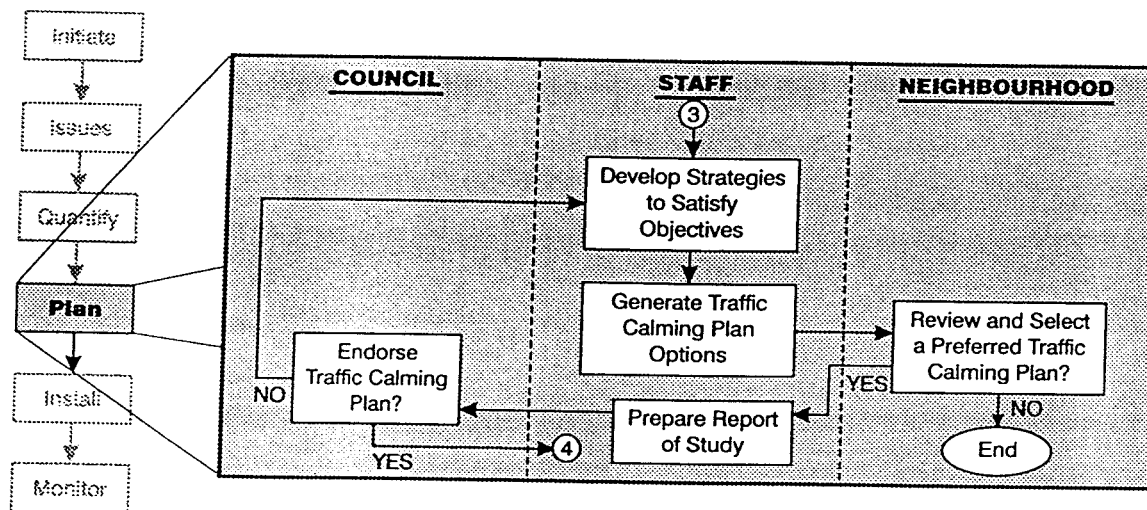


FIGURE 3.3 DEVELOPING A TRAFFIC CALMING PLAN

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4.0 FINANCING THE INITIATIVE

4.1 Funding by the District

Generally, funding of traffic calming projects by the District will only be considered for those projects where the existing conditions in the neighbourhood exceed at least one of the minimum operational thresholds shown in TABLE 4.1. Council will consider funding all or part of a traffic calming initiative, which exceeds one of these thresholds and has prior endorsement from Council, during the annual budget deliberations. Council may, at its discretion, choose to provide funding for other traffic calming initiatives as well. However, funding for traffic calming initiatives is constrained by the limits of the District's revenue generation abilities and the competing needs for funding of other services and capital programs.

TABLE 4.1 OPERATIONAL THRESHOLDS

CHARACTERISTIC	MINIMUM THRESHOLD CONDITION
Traffic Infiltration	20 percent or more of all traffic is through traffic
Excessive Travel Speeds	85th percentile operating speed is 16 km/h over the posted speed limit or greater
Traffic Volume	Traffic volume is greater than 1,000 vehicles per day

4.2 Funding by the Neighbourhood

Residents of a neighbourhood may elect to fund traffic calming plans as a Local Improvement Initiative under the Municipal Act of British Columbia. The cost of the traffic calming plan would be amortized over a 10, 15 or 20 year period and added to the property taxes of the benefitting properties. A Local Improvement Initiative requires a two thirds majority approval of the benefitting property owners and the approval of Council to proceed to implementation.

4.3 Other Potential Sources of Funding

Partial funding for traffic calming plans may be available from the Insurance Corporation of British Columbia (ICBC). ICBC will provide funding for projects which result in a significant safety benefit as demonstrated by a reduction in auto collision claims. This funding will be subject to a favourable benefit-cost analysis by ICBC.

5.0 IMPLEMENTATION AND PERFORMANCE MONITORING

5.1 Public Awareness

A public awareness program will accompany each traffic calming project. Adequate advice to local and through traffic will be provided prior to the implementation of any traffic calming project. The program will advise local residents of the details of the installation to minimize surprises or unexpected inconvenience to the neighbourhood.

For neighbourhood residents, the public awareness program will include a map of the neighbourhood showing the location of traffic calming device installations, a schedule of the installations, details of any local access disruptions and contact information for the project.

For through traffic and the larger community, the District will place notices in the local newspaper to raise awareness of the planned improvements and any need to modify travel routes. The notices will include a map showing the locations of improvements and the schedule of installation.

For emergency response services and District operations, the Engineering Department provide written notice of the planned installations two weeks prior to the installation date. The notices will advise of the need to modify routes and of any special provisions for emergency access.

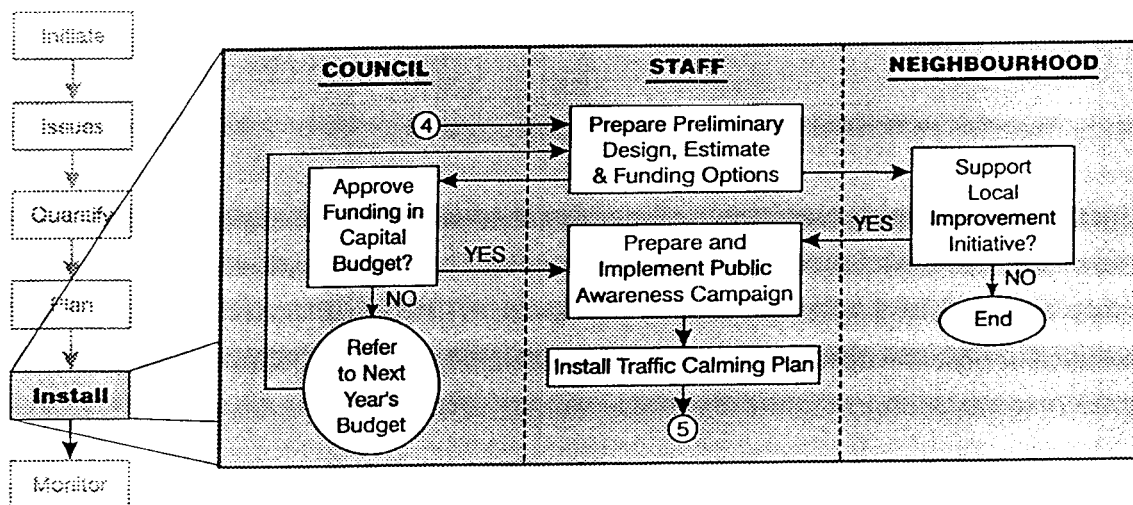


FIGURE 5.1 IMPLEMENTING THE TRAFFIC CALMING PLAN

5.2 Installation

Traffic calming projects can be implemented in three ways:

- trial or temporary installation;
- staged or phased installation; and
- full or permanent installation.

A. Trial or Temporary Installation

Trial or temporary installations are used when there is uncertainty as to the effectiveness of the traffic calming plan to meet the objectives of the neighbourhood and District. This uncertainty may rest with the neighbourhood or with Council. Therefore, trial installations will usually be initiated in one of two ways. Trial installations can be requested by the neighbourhood as an aid to discerning a preferred solution and prior to Council's consideration of the plan. Conversely, Council may, on considering the preferred traffic calming plan of a neighbourhood, direct staff to perform a trial installation. In all cases, Council must approve a trial prior to installation. Trial installations will use materials which can be readily removed at the end of the trial period.

B. Staged or Phased Installation

A traffic calming plan may use a staged or phased approach to implementation. This approach would typically apply to large neighbourhoods involving the installation of many traffic control devices. The staging will usually take one of three forms:

- treat problem locations as a first priority;
- treat area from one end to the other in a systematic manner for construction efficiency; and
- treat from the circumference inwards.

Should the neighbourhood require a staged implementation, District staff will recommend the appropriate form of phased installation. Staged installations will use materials which are permanently installed with appropriate landscaping and streetscaping features.

C. Full or Permanent Implementation

Full implementation will install all traffic control devices in the neighbourhood as quickly as reasonably possible by the construction forces. The benefits of this approach is that the whole neighbourhood is treated at once so that motorists do not have to adapted to a changing road network and it avoids the costs of temporary works. A disadvantage of full implementation is that the traffic control devices would be expensive to remove should the plan prove to be unsuccessful or unwanted.

5.3 Evaluating Performance

District staff will conduct a number of operational, social and perhaps environmental surveys to evaluate the performance of the traffic calming installations. The post performance evaluation will include:

- collection of operating speed data;
- collection of diversion effect data;
- collection traffic origin/destination data (through/local);
- safety performance analysis (collisions, conflicts); and
- public acceptance surveys.

A report evaluating the performance of the neighbourhood traffic calming installations will be prepared and submitted to Council. Council may authorize a supplemental public process to study and modify the traffic calming installations should their performance prove to be unsatisfactory.

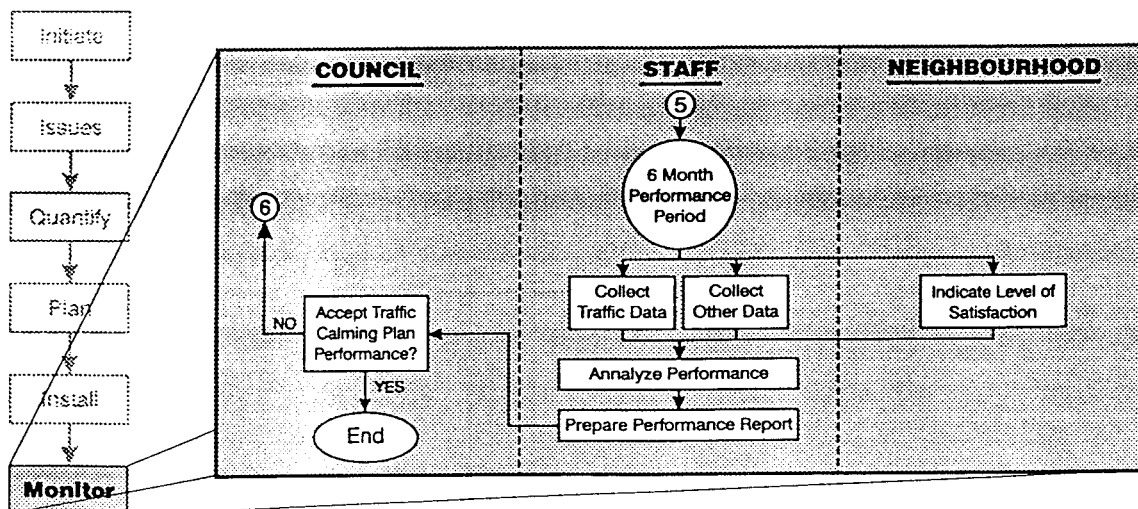


FIGURE 5.2 MONITORING THE TRAFFIC CALMING PLAN

APPENDIX A
ANNOTATED BIBLIOGRAPHY

ANNOTATED BIBLIOGRAPHY

1. **Adam, Ian, "Guidelines for Public Involvement Process", A report to the Vancouver Traffic Commission, City of Vancouver, September, 1996**

This report outlines the public communication guidelines for transportation projects in the City of Vancouver. The report primarily focuses on the methods of notification to the public for large and small projects.

2. **Austrroads, Guide to Traffic Engineering Practice, Part 10, Local Area Traffic Management. Austrroads, 1988**

This guide reflects experience gained in a number of Australian States as well as documented experience from other countries. It is concerned with planning the usage of road space within a neighbourhood to achieve goals, determined by affected parties, for the improvement of the residential environment. It defines a generic, systematic area-wide method for the treatment of problems, which can be tailored to the objectives and public consultation requirements of each community. Each step of the method is discussed in detail. The advantages and disadvantages of different approaches to each step are provided. Guidelines for public participation are provided.

3. **Braaksma, John P., and Lockwood, Ian M., Calm the Traffic, Excite the People: A Process for Community-Based Transportation Planning, presented at 1996 Annual Conference of the Transportation Association of Canada.**

This paper describes a community based approach to traffic calming, with a significant public consultation process, including the use of a community based working group, and several public meetings and workshops. A high level of consensus building is required.

**4. City of Bellevue, "Neighborhood Traffic Control Program",
<http://www.ci.bellevue.wa.us>, 1997**

This is a very brief document which describes the Neighbourhood Traffic Control Program for the City of Bellevue. The City uses a two phase approach to traffic calming. The first phase uses education, enforcement and updating the existing traffic controls to current standards. The second phase uses physical devices to control traffic such as: curb extensions, partial road closures, speed humps, traffic circles and medians. Some environmental thresholds for the phase two program are defined.

5. City of Burnaby, South East Burnaby Community Transportation Plan, 1995, various documents pertaining to a neighbourhood traffic calming initiative sponsored by the City.

These documents include: internal reports to Council and the Traffic and Transportation Committee, before and after traffic volume surveys, public acceptance surveys, speed hump plan and a stop sign control scheme. The traffic calming plan was implemented in the neighbourhood. The speed hump installations were funded under a local improvement program.

6. City of Portland, "The Traffic Calming Program: Simplification and Enhancement of the Neighborhood Traffic Management and Arterial Traffic Calming Programs", <http://www.trans.ci.portland.or.us>, September, 1994

This document describes the objectives, policies and process of the Traffic Calming Program for the City of Portland. The Traffic Calming Program includes three types of projects: Neighbourhood Collector Street projects; Complex Local Service Street projects; and Simple Local Service Street projects. A process for each type of project is included in the document. Most traffic calming projects are funded by the City, however a "Purchase Plan" for speed bumps and humps is also offered. Ranking criteria for City funded projects is included in the Appendix of the document.

7. City of New Westminster, "Neighborhood Traffic Studies" A Policy Paper, Engineering Department, April 16, 1991

This is a brief document which outlines the steps for conducting a neighbourhood traffic calming initiative in the City of New Westminster. It includes the public process, methods of communication to the neighbourhood, meeting format, implementation method and post performance analysis.

8. County Surveyors Society et al, Traffic Calming in Practice, Landor Publishing Ltd., 1994

This report describes the framework for traffic calming in the United Kingdom. The objectives, legislation, consultations and assessment of priorities are described. Advice is provided on how to develop and implement a successful traffic calming scheme, and the importance of 'before' and 'after' studies. The need for public consultation, and consideration of land use is stressed. Potential sources of funding are identified: the local authority, submissions to the Department of Transportation, from the private sector and occasionally from residents. Private sector contributors are suggested for traffic calming schemes near shopping centres, in conjunction with downtown revitalization, or in conjunction with a new residential development. Those projects which address safety concerns may be eligible for special funding.

The majority of the report is devoted to case studies which describe the location, need for measures, measures installed, special features, consultation process and results of monitoring and evaluation.

9. Ducote, Frank and Klimchuk, Don, "Traffic Calming Toolkit - Existing Measures and Procedures for Local Streets", City of Vancouver, April 1997

This document describes the traffic calming measures approved for use in the City of Vancouver and the current Neighbourhood Traffic Plan Process and the Local Improvement process for Traffic Calming Measures. The Traffic Plan Process is funded by the City, while the Local Improvement Process is funded by the neighbourhood.

10. Homburger et al, Residential Street Design and Traffic Control, Institute of Transportation Engineers, Prentice Hall, 1989.

This report is a handbook for the design and retrofit of residential streets to address concerns regarding noise, safety and livability. Chapters address the function, planning objectives, design and redesign, of local streets. It describes tools for neighbourhood traffic control, and describes methods for implementing neighbourhood traffic controls. The implementation section addresses legal, process and maintenance issues as well as the need to evaluate and fine tune. Sources of funding include general revenues of the municipality, fuel taxes, motor vehicle taxes, parking revenues, or other transportation funds. Occasionally, elements of neighbourhood traffic control have been funded by commercial developments. Neighbourhood-based funding, or community development grants maybe considered. Explicit budget should be considered for enforcement of new traffic requirements.

11. Kanely, Brian, Neighbourhood Traffic Calming - Do We Need Warrants? Institute of Transportation Engineers Resource Papers for the 1997 International Conference, 1997, pages 60-64

The City of Gainesville reviewed traffic data obtained in Gainesville Florida neighbourhoods where traffic calming measures were installed on neighbourhood streets. The data that was collected varied considerably and trends were difficult to identify. Additionally, some of the goals of traffic calming such as maintaining access, encouraging vitality, improving appearance and improving livability are all subjective, and difficult to quantify. The paper concludes that warrants for neighbourhood traffic calming would be inappropriate, and would be difficult to formulate. The paper provides guidelines which indicate when traffic calming may be appropriate.

12. Kant Edward J. and Muller, Russell D., Neighbourhood Traffic Management: Development and Implementation, One County's Experience, Institute of Transportation Engineers Resource Papers for the 1997 International Conference, 1997, pages 21-24

This paper describes the development of goals, objectives and policies relating to neighbourhood traffic management, and describes the agreed-upon thirteen step program. The program includes definition of the study area, selection of a neighbourhood team, and monitoring and evaluation. The County has allocated \$50,000 in the fiscal year for construction costs. Initial requests have used 50/50 cost sharing with the benefitting neighbourhood.

13. King County Traffic Engineering Section, Neighbourhood Traffic Safety Program - Working with Citizens to Improve Traffic Safety, brochure.

This brochure describes the two-phase program that King County uses to address concerns regarding through volumes, speeding, and drivers who ignore traffic signs. Phase one includes a radar/readerboard, traffic safety improvements, visibility improvements, and distribution of traffic safety educational materials. If the problems are not addressed by the Phase one measures, the county moves on to Phase two, which includes implementation of traffic calming devices.

14. Lockwood, Ian M., Do We Need Traffic Calming Warrants?, Institute of Transportation Engineers Resource Papers for the 1997 International Conference, 1997, pages 55-59.

This paper argues that traffic calming is appropriate for many reasons, and that traffic calming warrants, in the traditional sense, would be difficult to quantify. Exceptions would be the rule. For new streets, in-built traffic calming might be advantageous, but it would be difficult to apply warrants. The report recommends testing for appropriateness, and then prioritizing should be the key to initiating traffic calming on existing streets, not warrants. Tests of appropriateness include:

- is the street in, or on the approach to, a built-up area?
- do the land uses front the street, do vulnerable users use the street, is the land use sensitive, e.g., tourist, historic, hospital zone?
- is the community supportive?

Projects should be prioritized according to the severity of the problems, the filing date of the request, staff judgement, implementation costs and funding availability.

15. Mackie, Scott and Klassen, June, The Application of CONTRAM in Resolving Community Traffic Issues

This paper describes the City of Calgary Community Traffic Study Process. It then uses a case study to show how CONTRAM, a computer based traffic assignment model, can be used to assist in the assessment of alternatives.

16. O'Brien, Andrew P., The Need for Warrants - The Australian Experience, Institute of Transportation Engineers Resource Papers for the 1997 International Conference, 1997, pages 55-59.

This paper describes the context for traffic calming in Canberra, Australia. It describes the importance of a policy context for warrants, acknowledging that the definition of a problem is relatively subjective, and that there are no absolute thresholds which define a problem. It proposes that it is wrong in principle to apply the same level of acceptability across different types of locality, physical environment and local character, and that comparing one area with another, especially inner suburb with outer suburb, is unlikely to prove productive. It defines two types of warrants, action warrants and problems warrants, which indicate which problems must be addressed, and which could be addressed if funding were available, respectively.

Key features of other warrant systems are summarised, concluding that the best warrant systems incorporate a point scoring system with higher weighting to more important criteria, different street types and classifications are scored differently for the same data, a system that is readily understood and completely transparent. Typical parameters included traffic volume, 85th percentile traffic speed, non-local traffic volume, and collision data. Based on this survey, warrants are proposed for Canberra.

**17. North Central Section Institute of Transportation Engineers,
Neighbourhood Traffic Control, NCITE, 1994.**

This report was prepared by committee and is a summary of neighbourhood traffic control techniques which have been implemented, particularly in the North Central section (Minnesota, North Dakota and South Dakota). This report briefly proposes a model process. It emphasizes that pedestrians, disabled, emergency vehicles and school buses should be accommodated. The majority of the report is a toolbox of traffic calming measures. Each measure is described, and its impact on volumes, noise, complaints, accidents, enforcement, accessibility and community reaction is described.

18. Perone, Joseph P, Developing and Implementing Traffic Calming Warrants, ITE 1996 Compendium of Technical Papers.

This paper describes two sets of traffic calming warrants that have been developed for the City of Darebin in the State of Victoria, Australia. The first method, site analysis, considers reported accidents, heavy vehicles and speeds. The second method, environmental capacity, considers land use, building set backs, road geometry, public transport activity and pedestrian activity. Although both methods are equally valid, sites with demonstrated safety problems are given a higher priority for implementation.

**19. Skene, Mike, "Neighborhood Transportation Management Program",
A report to the Advisory Transportation Commission, City of Victoria,
March 1992**

This report states the initial objectives and policies of a Neighbourhood Transportation Management Program for the City of Victoria. A procedural outline for developing a neighbourhood plan and a list of criteria for ranking and selecting neighbourhoods for the program is included.

20. TAC/cite, Canadian Guide to Neighbourhood Traffic Calming, Draft. TAC 1998

The guide is a result of input to committee from transportation and planning professionals from across Canada. It focuses on traffic conditions and traffic calming measures on local and collector residential streets, primarily within urban areas. It defines traffic calming, explains its roles in transportation planning, and identifies issues related to designing and implementing traffic calming plans. Processes for involving the community in the development of a traffic calming plan are recommended and described in great detail. The report provides a recommended policy in broad terms, including good practices. The majority of the report consists of a description of a wide range of traffic calming measures, with guidelines for their use and design. Funding issues are not discussed.

21. Tanda, Wayne, Traffic Calming - San Jose's Experience. Institute of Transportation Engineers International Conference, 1997 (not included in compendium)

This paper describes the key elements of San Jose's approach to neighbourhood traffic concerns, as follows:

- provide arterials and alternatives such as light rail, so motorists do not feel the need to use residential streets;
- mitigate the impacts of new developments on adjacent residential neighbourhoods;
- try new residential street designs, such as narrower streets and roundabouts, to reduce traffic speeds;
- penalize the small minority who are speeders through photo radar on residential streets, in contrast with methods such as speed humps, that penalize both good drivers and bad;
- manage public expectations by instituting policies which define thresholds which must be met, before a particular device is utilized or a process is undertaken.

The paper also describes the evolution of the present-day approach. The first approaches had included street-by-street mitigation, informational programs, design features and an appeals program. Next the City tried a Neighbourhood Traffic Management Program, which dealt with entire neighbourhoods on a priority basis. This program was lengthy and controversial, and was eventually cancelled for budgetary reasons. This led to the current approach, which looks outside the neighbourhood. Lessons learned through this evolution included ensuring sufficient staff resources, managing expectations, involving the affected and setting realistic objectives.

APPENDIX B
REFERENCE KEY

TABLE B.1 REFERENCE KEY

ELEMENT	AGENCY			
	TAC/ cite ¹	Collier County, Fla. ²	Austrroads ³	NCITE ⁴
Pre-Application Conference		X	X	
Petition		X		X
Define Study Area/Define Problem	X		X	
Collect Data	X	X	X	
Analysis- Does it Meet Warrants		X		X
Meeting to Present Findings	X	X		
Develop Team	X	X	X	
Consider Improvements to Arterials				
Consult with Services	X		X	
Develop Solutions		X	X	X
Meeting #2 to present Alternatives		X		
Consensus-building		X	X	
Measure Community Support	X	X	X	X
Presentation to Council	X	X		
Implementation	X	X	X	X
Evaluation		X		X

Notes:

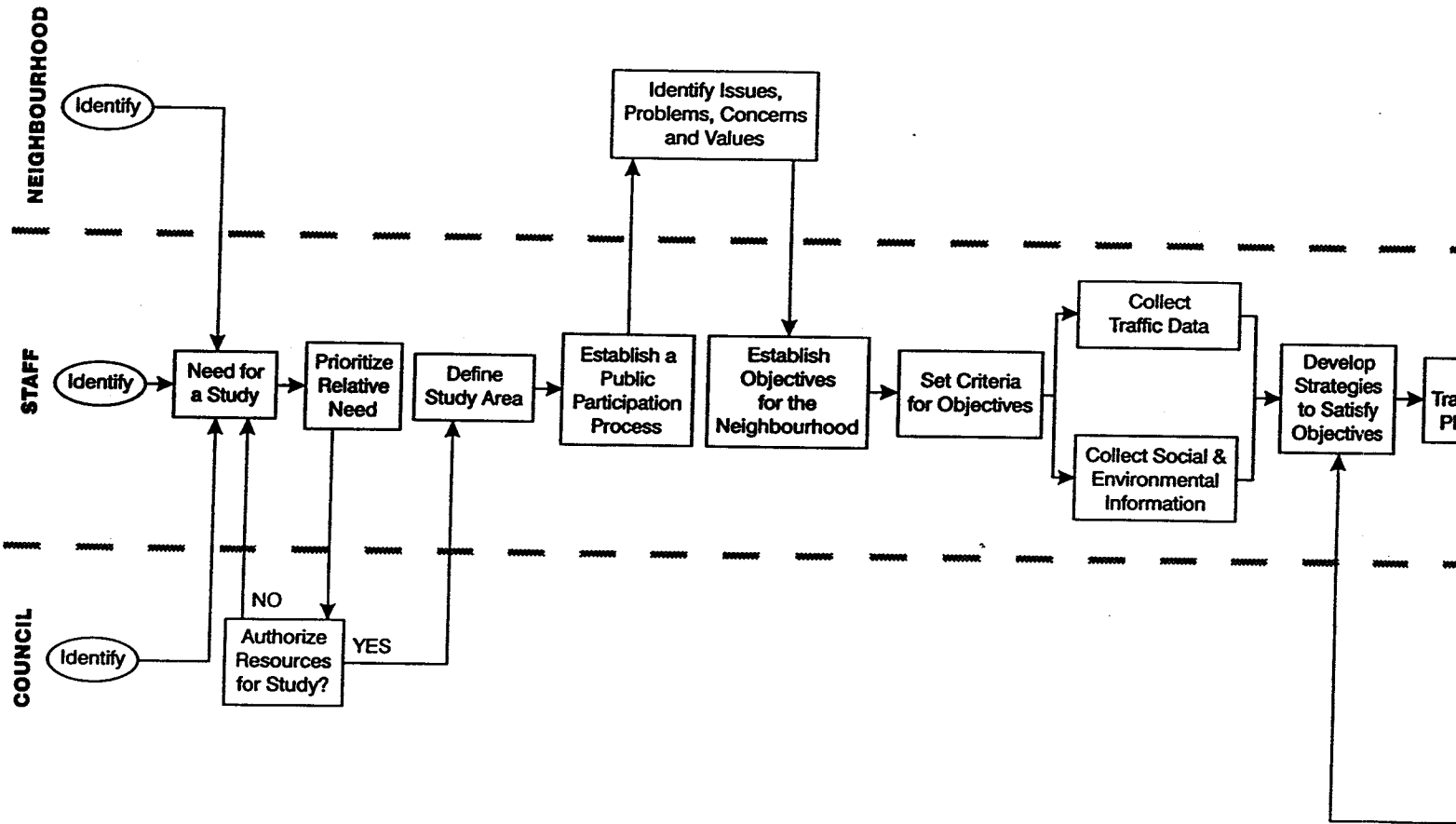
1. Canadian Guide to Neighbourhood Traffic Calming, TAC/cite
2. Neighbourhood Traffic Management: Development and Implementation, One County's Experience, ITE Compendium for the 1997 International Conference
3. Guide to Traffic Engineering Practice, Local Area Traffic Management, Austrroads
4. Neighbourhood Traffic Control, North Central Section, Institute of Transportation Engineers

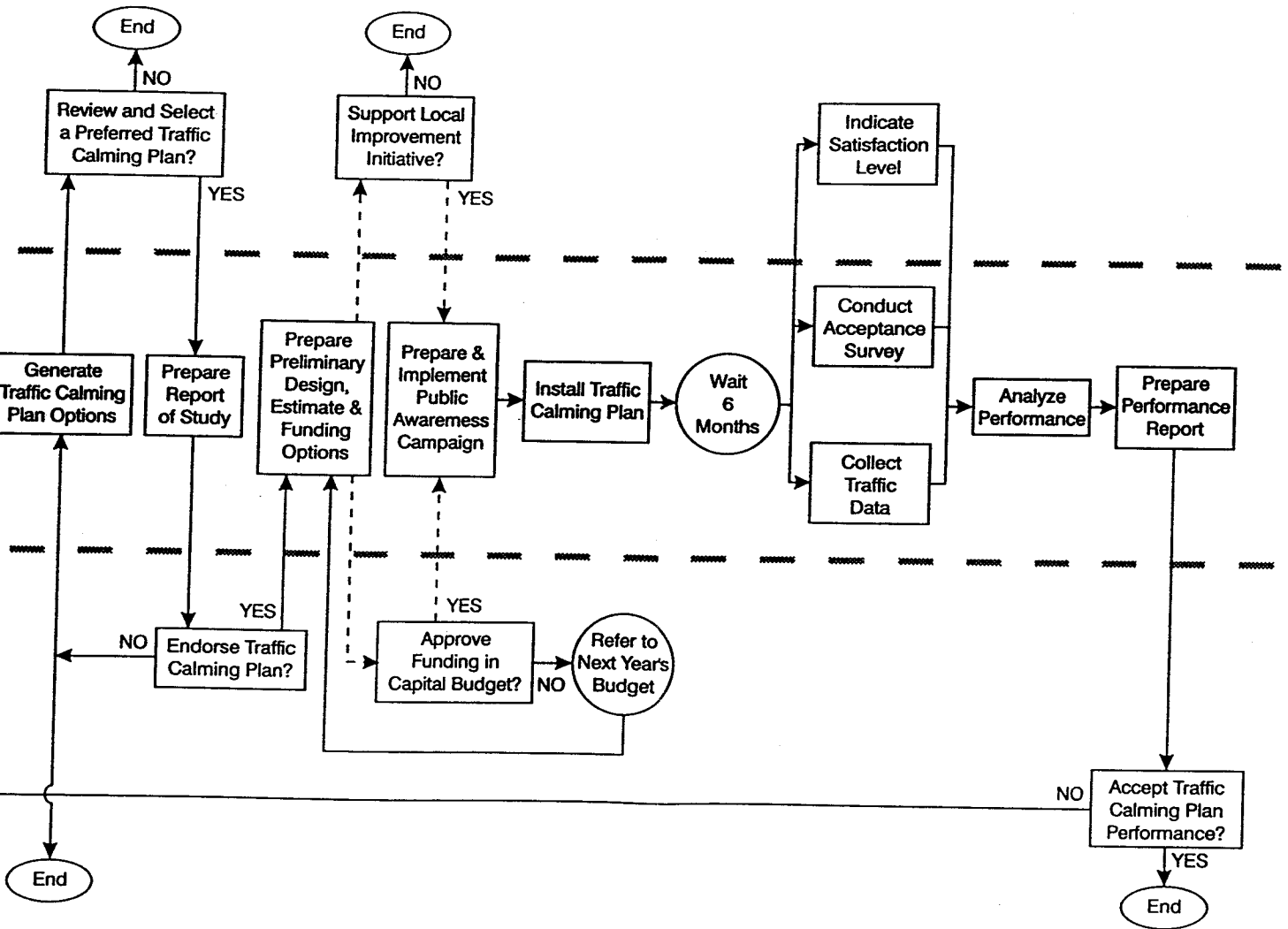
APPENDIX C

PLANNING PROCESS FLOWCHART

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NEIGHBOURHOOD TRAFFIC CALMING PROGRAM AND PROCEDURES





**FIGURE C-1 PLANNING
PROCESS FLOWCHART**

COUNCIL AGENDA/INFORMATION

<input type="checkbox"/> In-Camera	Date: _____	Item # _____
<input checked="" type="checkbox"/> Regular	Date: <u>Aug 9/99</u>	Item # <u>16.</u>
<input type="checkbox"/> Info Package	Date: _____	Item # _____
<input type="checkbox"/> Agenda Addendum	Date: _____	Item # _____

Dept.
Manager

RWJ
Director

[Signature]
Municipal
Manager

The Corporation of the District of North Vancouver

REPORT TO COUNCIL

July 20, 1999
File: 8620-30/00.01
Tracking Number: RCA - 013

ORIGINAL
File No. 8620-30/00.01
ENGINEERING

AUTHOR: Donna Howes, P. Eng., Assistant Manager, Transportation Planning
Ken Krueger, A.Sc.T -Transportation Planning

SUBJECT: Neighbourhood Traffic Calming Program and Procedures

RECOMMENDATION:

That Council adopts the Traffic Calming Policy for the District (Attachment 1).

REASON FOR REPORT:

1. To provide Council with a summary of the results of the community input to the Neighbourhood Traffic Calming Program and Procedures since the Council meeting of April 12, 1999.
2. To recommend the adoption of a policy with respect to Traffic Calming on District Roads, in accordance with the "Neighbourhood Traffic Calming Program and Procedures", as set out in the December 1, 1998 report of G.D. Hamilton Associates Consulting Ltd. with the inclusion of Minor Collectors.

SUMMARY:

Following Council's approval in principle of the Neighbourhood Traffic Calming Program and Procedures report (Hamilton, December 1998) the Transportation Planning Department referred the report on to the Community Associations, TPAC, APC, and FONVCA. Meetings were also held with TTAC, RCMP, Fire Services, CDNV Planning Department as well as the Cities of Richmond and Vancouver. Input has been received and shows unanimous support for the general principles of the report. There is also strong support to have Minor Collector roads (collectors which are not a bus route or a major emergency route) included as an addendum to the report. The report recommends the adoption of a Traffic Calming Policy based on the Programme and Procedures of the Hamilton Report.

BACKGROUND:

At the April 12, 1999 Regular Council meeting, the following motion was passed:-
THAT

1. the "Neighbourhood Traffic Calming Program and Procedures, as set out in the December 1, 1998 report of G.D. Hamilton Associates Consulting Ltd. be approved in principle; and

2. this report be referred to the Community Associations, North Vancouver Transportation Planning Advisory Committee (TPAC), the Advisory Planning Commission (APC) and the Federation of North Vancouver Community Associations (FONVCA), RCMP Traffic and Community Policing Sections for input, and a final report be returned to Council.

EXISTING POLICY:

There is no existing policy on Traffic Calming. The principles of the Hamilton Report, if adopted by Council, will set the programme and procedures for a Traffic Calming Policy for the District (Attachment 1).

ANALYSIS:

Input to the Hamilton Report:-

An information package (Attachment 2) was sent on May 10, 1999 to all official and unofficial Community Associations (28 total) requesting each representative fill in and return a questionnaire by June 17, 1999. This was intended to gauge the community's level of acceptance for the program.

Presentations by staff were given to TPAC (May 11, 1999) and APC (May 19, 1999) and questionnaires were distributed to committee members.

Staff received feedback from:

- A meeting was held with the Cities of Richmond and Vancouver (April 23, 1999) to discuss the draft report and experience in the different municipalities. Richmond and Vancouver are also in the process of developing a policy.
- A meeting was held with RCMP Traffic Safety, CDNV Fire Services and CDNV Planning Department (April 28, 1999) – the report was circulated and comment received. All parties endorsed the general principles of the report and the need to include minor collectors.
- Community Policing: Contact was made with the RCMP Community Policing representatives who received the report and supported the principles.
- Technical Transportation Advisory Committee (TTAC), TransLink (June 10, 1999) - Discussed impacts of traffic calming measures on bus service. TransLink understands that traffic calming may be warranted on some collectors on which buses operate, and is prepared to work with municipalities on a case-by-case basis. (Attachment 3)

Assessment of feedback:

The questionnaire feedback is summarised in tables in Attachment 4. 7 Community Organisations, 5 TPAC members and 4 APC members replied to the questionnaire.

Note : In the assessment, neutral support is viewed as a positive response.

In summary,

1. There was unanimous support for the General Principles of the Hamilton report (14 – support; 2 – neutral).
2. All respondents agreed with including Minor Collectors in the programme. (12 – support; 4 – neutral).

3. There was mixed response for the priority of Minor Collectors over Local roads. 11 respondents supported this (4 – support; 7 – neutral) and 5 did not support.
4. Regarding the timing of follow-up study, there were incomplete responses for this section. However, there was not strong support for one study per year, and more support for a follow-up study within 12 months. The majority supported additional funding from the budget to meet this timetable.

Minor Collectors:

It is recommended that Minor Collectors be added to the "Neighbourhood Traffic Calming Program and Procedures", as set out in the December 1, 1998 report of G.D. Hamilton Associates Consulting Ltd.

The Preliminary Screening Criteria listed in the Hamilton report (Table 2.1) supports local roads only. In addition Operational Thresholds (Table 4.1) in the funding section apply to local roads only. Staff has developed a set of Preliminary Screening Criteria and Operational Thresholds for Minor Collectors based on existing count and speed data in order to provide a fair system for screening. The tables are listed in Attachment 5.

It is recommended that Attachment 5 be added to the Hamilton Report.

Timing/Approval Process:

It is important that a procedure and program for traffic calming be endorsed as soon as possible which will guide current applications and assist staff in resolving current issues. Once this is approved, it is anticipated that the principles and procedures will be applied, monitored and refined over time.

Concurrence:

The final report was reviewed by TPAC on July 13, 1999 (Attachment 6). It was recommended:

THAT TPAC endorse the Hamilton and Associates Report on Traffic Calming in its entirety, and accept the limitations that the roads for traffic calming will be local roads and minor collectors.

Financial Impacts:

Based on the limited resources and staff time, it may be only possible to undertake one traffic calming study per year. The current traffic calming requests are listed in Attachment 7.

The questionnaire feedback showed support for a follow-up study to occur within 12 months of the traffic calming request being submitted. This will require additional budget and support for this was also reflected in the questionnaire.

Traffic Calming projects will need funding for study and implementation. The costs are dependent on the size and scope of the project. Requests for funding will be forwarded in the annual budget.

Liability/Risk:

N/A

Business Plan:

- **Social Policy Implications**
The liveability of District neighbourhoods has the potential be improved by Traffic Calming, by reducing vehicle speeds, noise and short cutting through neighbourhoods.
- **Environmental Impact:**
The potential for reducing traffic volumes through communities could also reduce air pollution to a small degree in those areas.
- **Public Input:**
Feedback was received from Community Associations and Council Committees. (Attachment 4).

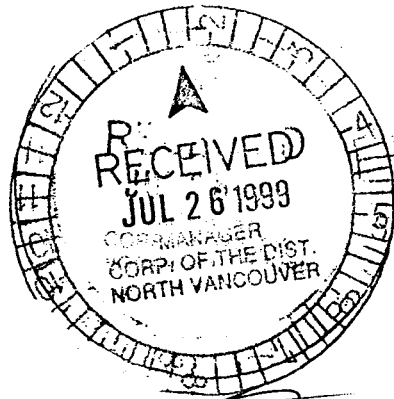
Options:

That Council

1) Adopts the Traffic Calming Policy for the District (Attachment 1).

OR

2) Receives this report for information.



Donna Howes, P.Eng.,
Assistant Manager,
Transportation Planning

Ken Krueger, A.Sc.T.,
Transportation Planning

REVIEWED WITH: <input type="checkbox"/> Communications <input type="checkbox"/> Env. Protection <input type="checkbox"/> Human Resources <input checked="" type="checkbox"/> Eng. Public Works <input type="checkbox"/> Eng. Admin. <input type="checkbox"/> Eng. Parks	REVIEWED WITH: <input type="checkbox"/> Finance <input checked="" type="checkbox"/> Fire Services <input type="checkbox"/> Legislative Services <input type="checkbox"/> Land <input type="checkbox"/> Permits & Licenses <input checked="" type="checkbox"/> Planning <input type="checkbox"/> Social Planning	REVIEWED WITH: External Agencies: <input type="checkbox"/> Recreation Commission <input type="checkbox"/> Library Board <input type="checkbox"/> Health Dept. <input checked="" type="checkbox"/> RCMP <input checked="" type="checkbox"/> Other: <u>Community Policing</u>	REVIEWED WITH: Advisory Committees: <input checked="" type="checkbox"/> <u>TPAC</u> <input checked="" type="checkbox"/> <u>APL</u> <input type="checkbox"/> _____
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The Corporation of the District of North Vancouver

CORPORATE POLICY MANUAL

Section:	Transportation & Public Works	11
Sub-Section:	Transportation Planning	8620
Title:	TRAFFIC CALMING	

POLICY

The District shall implement Traffic Calming in accordance with the "Neighbourhood Traffic Calming Program and Procedures", as set out in the December 1, 1998 report of G.D. Hamilton Associates Consulting Ltd. with the inclusion of Minor Collectors.

REASON FOR POLICY

The District shall use traffic calming measures as a means to:

- reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorised street users.
- restore streets (Local and Minor Collectors) to their intended function and correct motorist behaviours to acceptable community norms.

AUTHORITY TO ACT

Delegated to Staff

PROCEDURE

Refer to report "Neighbourhood Traffic Calming Program and Procedures", December 1, 1998, G.D. Hamilton Associates Consulting Ltd. with the inclusion of Minor Collectors. The report is held in the Clerks Department.

Approval Date:		Approved by:	
1. Amendment Date:		Approved by:	
2. Amendment Date:		Approved by:	
3. Amendment Date:		Approved by:	

May 10, 1999

File: 8620-30/01.01

Dear :

NEIGHBOURHOOD TRAFFIC CALMING PROGRAM AND PROCEDURES

The District is in the process of developing a Neighbourhood Traffic Calming Policy. We have attached a report entitled "Neighbourhood Traffic Calming Program and Procedures, District of North Vancouver" prepared by Hamilton and Associates Consulting Ltd. in December 1998 which will form the basis for the policy. This report was endorsed in principle by Council on April 12, 1999 subject to review and input from Community Associations.

Each year Engineering Services receives many requests to examine local traffic situations and to install additional traffic controls. The main aim of this report is to provide a guide in reviewing traffic calming requests. It outlines: -

- ♦ how to assess if there is a problem and the extent of the problem,
- ♦ what procedure to use in studying the problem and identifying possible solutions,
- ♦ how the measures could be implemented.

Different types of traffic calming measures (e.g. speed hump, traffic circle) will be assessed for each traffic problem that is identified as requiring a study. The newly released "Canadian Guide to Neighbourhood Traffic Calming", Transportation Association of Canada, March 1999 is to be used as the main reference in selecting measures.

This report currently refers to traffic calming for local roads only. It also excludes any roads that are part of a bus route or a main emergency routes. It is a recommendation from staff that minor collector roads (low volume collectors that are not a bus route or emergency route) also be included in the policy. (A short definition of types of roads is included in this letter and a map showing examples is attached for your reference).

Depending upon current staff resources and budget considerations, it may be possible to complete only one study and implementation per year.

We have attached a short survey form for your community association's input and comments. As a representative for your association, could you please complete and return this survey in the enclosed envelope by June 17, 1999.

We will be incorporating comments on the "Neighbourhood Traffic Calming Program and Procedures" report in the overall policy on Traffic Calming. An updated report will be presented to Council as soon as we have received all feedback. Once the Traffic Calming Policy is approved we anticipate applying the principles and procedures as a pilot study.

If you have any questions or require further information, please call me at 990-2402 or Ken Krueger, Transportation Technologist, at 990-2349.

Yours truly

Donna Howes, P. Eng.
Assistant Manager, Transportation Planning.

Name:

Date :

Association:

		Support	Do Not Support	Neutral
1	Do you agree with the general principles included in the report on the Neighbourhood Traffic Calming Program and Procedures?			
2	Do you think Minor Collector Roads should also be eligible for Traffic Calming?			
3	Do you think Minor Collector Road concerns should be given a higher priority than concerns over Local Roads?			
4	If the screening criteria establishes that a traffic calming problem does exist, follow up detailed study should be initiated :			
	4.1 based on the level of severity (1 per year)			
	4.2 within 12 months			
	4.3 other (explain)			
5.	If you support 4.2 or 4.3 above, would your Association support additional District funding for this programme in order to meet this timetable?			

Additional Comment:-

Note:

Local Roads : The main function is to provide property access. Traffic movement is of secondary importance and primarily involves travel to and from a collector facility. Trip length is short.

Collector Roads : The main function is to collect and distribute traffic into and out of a neighbourhood, and provide property access.

Minor collector Roads: Those collectors that are not a bus route and not a major emergency route.

Arterial Roads: The main function is to carry trips of longer duration and through traffic, as well as accommodate significant volumes of traffic.

The Corporation of the District of North Vancouver

June 1, 1999

File: 8620-30/00.01

TO: TTAC members
TransLink

FROM: Donna Howes
Transportation Planning, District of North Vancouver

SUBJECT: TRAFFIC CALMING ON BUS ROUTES

The District of North Vancouver is currently developing a Traffic Calming Policy. The draft policy was prepared by Hamilton and Associates and is currently under review by TPAC (Transportation Planning Advisory Committee), APC (Advisory Planning Commission), Community Associations and staff. The District is seeking general input on the program and procedures as well as whether calming should be included on some collectors. We plan to take the revised policy to Council in July 1999.

The Hamilton Report recommends that traffic calming measures would generally apply only to local roads that are not bus routes or major emergency routes.

The feedback from staff and some external groups has questioned why the restrictions on traffic calming for bus routes. The most recent experience of the District with traffic calming implementation was on Garden Avenue in 1998. A traffic circle was implemented as well as a number of chicanes. Garden Avenue is a collector and a bus route and there was little support from BC Transit for the traffic circle. BC Transit preferred a 4-way stop option.

Through TTAC, we wish to elicit some general response from other municipalities as well as TransLink and BusLink regarding the use of traffic calming measures on bus routes.



Donna Howes, P. Eng.
Assistant Manager, Transportation Planning.

Regional Transportation Network
13401 – 108th Avenue, Surrey, BC, Canada V3T 5T4

June 3, 1999

TO: Chuck Gale, Chair & Members of the
Transit Technical Advisory Committee

FROM: Hansel Wang, Implementation Planning

SUBJECT: **Traffic Calming on Bus Routes**

The purpose of this report is to provide TransLink's comments on the report from the District of North Vancouver of June 1, 1999, regarding traffic calming measures on bus routes.

TransLink agrees in principle with the policy recommendation from Hamilton & Associates that traffic calming measures should generally apply only to local roads that are not bus routes or major emergency routes. This would exempt transit from being adversely affected by these devices from a customer and operational standpoint. Specifically, there are concerns for measures such as speed humps and chicanes, etc., which can sometimes present operational and safety problems for conventional buses while reducing quality of service for customers.

TransLink does understand that, traffic calming measures may be warranted on some collectors on which buses are operating. In this case, TransLink is prepared to work with municipalities to identify effective traffic calming measures that also meet transit requirements on a case-by-case basis. As noted, the District of North Vancouver recently installed a traffic circle on Garden Avenue at Hope Road. However, the "Yield" control at the traffic circle was subsequently replaced with the 4-way stop control (with the traffic circle intact) because motorists were confused of the right-of-way at the intersection. It should be noted that TransLink does not have a preference for 4-way stop control at traffic circles. The applicability of these devices varies with the traffic and geometric conditions of the roadway concerned.

This hopefully clarifies TransLink's position on this issue.

The Corporation of the District of North Vancouver

June 11, 1999

File: 8620-30/00.01

TO: Ken Krueger
FROM: Donna Howes

SUBJECT: TRAFFIC CALMING ON BUS ROUTES- FEEDBACK FROM TTAC

This item (Attachment 1) was discussed at TTAC yesterday and I have summarised the comment:-

1. TransLink (Dave Currie):

Transit is the most impacted by traffic calming measures. It is not considered safe when driving over speed humps as some passengers could be affected if standing. The measures slow down the bus and therefore affect schedules.

2. Coquitlam: (Deb Day)

Speed humps are not supported at all and will not be implemented as part of the policy.

3. Delta: (Dan Moody)

Generally do not implement speed humps on bus routes

Traffic circle has been implemented on a bus route. Checks done at old Boundary bay airport (can be used by any municipality) and it is working well.

In Seattle vertical deflections are used on bus routes and it seems to be okay.

4. Surrey (Mike Lai):

Are implementing a test section for speed humps on a major collector and a bus route (Near Panorama Ridge).

In Portland buses use routes with vertical deflection and this is also supported by the latest ITE guide.

5. Burnaby (Jack Bellhouse):

Only one speed hump on a bus route - Bond street.

Agrees that there is an issue with rider safety and there is general consensus to avoid the use.

Referred to latest TRL report where there is discussion on vertical deflections (Attachment 2).

TransLink did provide a report (Attachment 3) which spells out their policy.

In general TTAC agreed that calming should be avoided on bus routes but where seen to be necessary it would be taken on a case by case situation.

FEEDBACK FROM QUESTIONNAIRE

COMMUNITY ORGANISATIONS

	Question # 1 Agreement With General Principles		Question # 2 Do you think minor collectors should be eligible for traffic calming ?		Question # 3 Should Minor Collectors concerns be given a higher priority over Local Roads ?		Question # 4.1 If screening criteria establishes that a Traffic Calming problem exists, follow up study should be initiated based on severity level (1 per year) ?		Question # 4.2 If screening criteria establishes that a Traffic Calming problem exists, follow up study should be initiated within 12 months ?		Question # 5 If you support 4.2 or 4.3 would your Assoc. support additional CDNV funding to meet this timetable?	
	support	don't support	support	neutral	support	neutral	support	neutral	support	neutral	support	neutral
1	X		X		X		X		X		X	
2	X		X		X				X		X	
3	X		X		X				X		X	
4		X		X		X						X
5	X		X			X					X	
6	X		X			X					X	
7		X		X		X			X			X
Percentage Support	71%	0%	71%	0%	57%	14%	29%	Incomplete Responses	80%	20%	66%	17%

Note: Of the 28 community organisations surveyed, only 7 replied (25%) even after follow up phone calls. See individual comments on next page

COMMITTEE MEMBERS

	Question # 1 Agreement With General Principles		Question # 2 Do you think minor collectors should be eligible for traffic calming ?		Question # 3 Should Minor Collectors concerns be given a higher priority over Local Roads ?		Question # 4.1 If screening criteria establishes that a Traffic Calming problem exists, follow up study should be initiated based on severity level (1 per year) ?		Question # 4.2 If screening criteria establishes that a Traffic Calming problem exists, follow up study should be initiated within 12 months ?		Question # 5 If you support 4.2 or 4.3 would your Assoc. support additional CDNV funding to meet this timetable?	
	support	don't support	support	neutral	support	neutral	support	neutral	support	neutral	support	neutral
1	X		X		X				X		X	
2	X		X		X							
3	X		X			X					X	
4	X		X		X						X	
5	X		X			X				X		X
6	X		X			X						X
7	X		X			X				X		X
8	X			X								
9	X			X								
Percentage Support	100%	0%	77%	0%	44%	56%	Incomplete responses	60%	0%	40%	66%	33%

See individual comments on next page

FEEDBACK FROM QUESTIONNAIRE

Organisation	COMMENTS
Blueridge	Once screening establishes a problem, a detailed study should follow immediately. The full involvement of residents/community is needed and should also involve Council/Staff in the final decision of proposed projects. Current parking bylaws should also be taken into account. Measures similar to those in Burnaby/New Westminster are good examples.
Lions Gate	Identified study areas should be prioritised. More than one study per year could be undertaken but a significant amount of extra funds should not be earmarked for the studies. Funds for implementation will also need to be found. Since our 2 Minor Collectors in Lions Gate are to be studied in 1999 (Fullerton & Curling) we assume we are first in line for consideration of Traffic Calming studies.
Lower Capilano	All Collectors should be included, no road with a problem should be left out, bus route or not. If CDNV Staff are not capable of handling Transportation problems, then outside sources should be used.
Norgate Park	Our community probably does not have a great need for Traffic Calming as any problems in the area are created by our residents on people who are lost. The only road that could use some calming is 15th Street which has an A.M. bus route westbound. This therefore probably does not allow much room for traffic calming. We wish you success with your new process.
Seymour Valley	Feel District should decide on funding issues based on severity and magnitude of problem. CDNV should give priority based on outstanding areas before new projects are started. Felt that the severity formula would help to identify areas of highest concern. Residents close to Minor Collectors felt that the entire street should be treated as a Local. Residents on Riverside south of Grantham north of Mt Seymour Pkwy supported 2 & 3, but residents furthest away were not supportive. Neighbourhood aesthetic improvement possible with Traffic calming. Concern of increased tax to any area requiring calming. CDNV should also consider the parking concerns as part of the process, and feels that Riverside Dr would be a good pilot project due to its unique nature.
Seymour	No comments
Sunset Gardens	If screening establishes a traffic issue it will determine cause and effect and time of problems.-Why the need for additional staff and funds for a "detailed study"? People on staff are or should have detailed information on hand continually.
TPAC	Traffic problems should be assessed regardless of street classification. Each situation is unique - by excluding some roads there is a feeling of unfairness.
TPAC	Likes the setting of criteria / benchmarks in the program to measure severity of problem.
APC	We should focus on safety issues.
APC	Needs more information to respond to Questions 3 & 4. Depends on what's happening around the Minor Collectors.
APC	Traffic Calming may be required on any class of road. The degree & extent of such steps can & should differ through out.

1. PRELIMINARY SCORING

LOCALS – Hamilton Report (Table 2.1)

CRITERIA	POINTS	BASIS FOR POINTS ASSIGNMENT
Speed	0 to 25	85 th percentile traffic speeds more than 5 km/h above the posted speed limit (5 points for every 1 km/h)
Volume	0 to 25	Average daily traffic volumes (1 point for every 100 vehicles)
Total Possible Points	50	

MINOR COLLECTORS- proposed

CRITERIA	POINTS	BASIS FOR POINTS ASSIGNMENT
Speed	0 to 25	85 th percentile traffic speeds more than 5 km/h above the posted speed limit (5 points for every 2 km/h)
Volume	0 to 25	Average daily traffic volumes (1 point for every 200 vehicles)
Total Possible Points	50	

2. FUNDING OPERATIONAL THRESHOLDS

LOCALS – Hamilton Report (Table 4.1)

CHARACTERISTIC	MINIMUM THRESHOLD POSITION
Traffic Infiltration	20 percent or more of all traffic is through traffic
Excessive speeds	85 th percentile operating speed is 16 km/h over the posted speed limit or greater
Traffic Volume	Traffic volume is greater than 1,000 vehicles per day

MINOR COLLECTORS - proposed

CHARACTERISTIC	MINIMUM THRESHOLD POSITION
Traffic Infiltration	50 percent or more of all traffic is through traffic
Excessive speeds	85 th percentile operating speed is 16 km/h over the posted speed limit or greater
Traffic Volume	Traffic volume is greater than 3,000 vehicles per day

A . TACHMENT 6

MINUTES of the District of North Vancouver Transportation Planning Advisory Committee Meeting held in the Committee Room, on Tuesday, July 13, 1999 commencing at 7:00 p.m.

4. STAFF REPORTS

- a) Traffic Calming – Staff noted minor changes to the text and Attachment 3. Further comment from TPAC is requested at this meeting.

Comments:

- Suggest one traffic calming study per year too little.
- Q:- Seems to be a complex system with many stages
 - Costly in terms of time and money
 - Understand for a large town centre, but is this process too long, complex and expensive for most problems within District of North Vancouver?

A:- Traffic calming is a lengthy process and will take time to involve the neighbourhood. It must be remembered that impacts have to be considered not just in the immediate area but in the rest of the neighbourhood. In smaller studies some of the steps may take a very short time. It is important to have a procedure that is followed for each study.

- Not all steps lengthy or necessary, but process is there so no aspect overlooked
- No process exists right now for Traffic Calming in the District – Ad Hoc basis – Process recommended provides orderly way of dealing with each problem area on a priority basis depending on severity of problem
- There seems to be support that all streets be included, not just locals and minor collectors
- Q:- What is the process to stop the District from changing the designation of a road from a minor collector to a collector?

A:- Not easy to change current classification of roads – A whole separate process involved to change classification of a road.

Moved by Dalia Gottlieb-Tanaka,

THAT TPAC endorse the Hamilton Report with the slight amendment that all roads in the District, except arterial highways, should be included.

Moved by Weldon Congdon, Seconded by Brian Konst and CARRIED by a Majority

THAT TPAC endorse the Hamilton and Associates Report on Traffic Calming in its entirety, and accept the limitations that the roads for traffic calming will be local roads and minor collectors.