

A HISTORY OF TRAFFIC CALMING POLICY IN GUELPH

Prepared by Hugh Whiteley July 13 2020

Background

In the 1920's automobile travel began to replace street-car and rail-based commuting as the primary form of urban travel. This trend was interrupted by the second World War but by 1950 the primary principle of urban planning was to configure development around road networks in order to allow easy travel by car. During the first decades of automobile-dominated landuse planning little or no attention was paid to the impact of traffic on the liveability of neighbourhoods.

The first major study of the impact of road traffic on the social fabric of neighbourhoods was conducted by Colin Buchanan for the UK Ministry of Transport. The study, published in November 1963, was titled *Traffic in Towns: A study of the long-term problems of traffic in urban areas*. In this book Buchanan introduced the concept of Environmental Traffic Capacity of streets, based on observations that showed high traffic volumes on residential streets created degradation of amenity for local residents. The study also demonstrated that the negative impact of traffic volume on amenity was more severe if the traffic was through traffic rather than locally-generated traffic. Buchanan recommended the removal of through traffic from residential streets wherever this was possible.

In the United States parallel studies of the impact of traffic volume on residential amenity was conducted by Donald Appleyard, a British-trained surveyor and architect who taught at MIT and UC-Berkeley. His study results were presented in the book *Livable Streets* published in 1981. Both Appleyard and Buchanan concluded that traffic volumes on neighbourhood residential streets above about 2,000 to 3,000 vehicles per day were problematic and that through traffic was the most significant contributor to the loss of residential amenity from traffic.

Donald Appleyard was killed in a tragically ironic incident in Athens Greece in September 1982. A speeding car, travelling at over 100 mph, crossed a median and crashed into the vehicle in which Appleyard was a passenger. Earlier that year Appleyard had been interviewed by the San Francisco Examiner. During the interview he suggested residents should take charge of conditions on their streets. *"Why do so many people suffer the intrusions that take place on their street, the speeding hot-rodders, the noisy motorcycles, the trucks, the short-cutters?"* he asked.

City of Guelph adoption of Livable Streets Policies

(1) 1975 - Adoption of District Plan 8 in the Official Plan

By 1970, well before the publication of *Livable Streets*, landuse planners had begun to take account of the negative effects of traffic on livability of neighbourhood streets as documented by Buchanan in *Traffic in Towns*. The City of Guelph was among the earliest Canadian adoptors of the concept of liveable streets. District Plans were added to the City's Official Plan in 1975. The District 8 Plan for the College Heights and Kortright Hills neighbourhoods incorporated liveable streets principles in the following ways:

- District Objective (4) for Residential Neighbourhoods ***“Establish a transportation network that will facilitate the movement of through traffic while minimizing the environmental impact on residential neighbourhoods.”***
- District Objective (2) for Transportation ***“Separate local and through traffic”.***
- District Objective (4) for Transportation ***“Reduce, and avoid where feasible, the exposure of residents to major traffic routes and associated noises, air pollution and safety hazards”.***
- District Objective (7) for Transportation ***“Provide for a tertiary transportation system (pedestrian walkway/bikeway) throughout the District”.***
- The Detailed Policy Statement for Residential Neighbourhoods (1.10) ***“That a hierarchy of streets be developed to facilitate the movement of traffic for local and service needs”.***
- The Detailed Policy Statement for Transportation 5.1 ***“That a hierarchy of streets be developed to facilitate the movement of traffic for local and service needs “.***
- The Detailed Policy Statement for Transportation 5.1.8 ***“That local streets be developed within the District in a manner that relates to the arterial network and the existing topography and natural vegetation”.***

Appendix 1 – Background Information Planning District 8 – Southview describes the planning philosophy for the District 8 Road System as follows; ***The road transportation facilities for the Southview Planning District have been developed on the assumption that the Hanlon Expressway would be the major north/south arterial route for this area of the City and therefore the corollary that the arterial and collector system in this District will orient east to the Hanlon Expressway...The arterial routes designated in the concept are: The Hanlon Expressway; Stone Road; Downey Road; Arterial Road Number 4*** { a proposed arterial at the southern boundary of District 8 connection to the Hanlon never built}. ***With this arterial network the collector system has been designed. The collector streets must relate to the arterial net, the physical features, the projected population density, the land use and to the existing constraints while providing convenient access and preventing through traffic in the neighbourhoods and the conservation area. The designated collector streets in the Southview Planning District are College Avenue and its southern extension; Collector No. 2***(Ptarmigan Drive).

(2) 1998 - Adoption of Neighbourhood Traffic Management Policy

In July 1998 City Council adopted a Neighbourhood Traffic Management Policy (NTMP) that applied liveable city principles for road design and use to all roads in the City that are classified as local or two-lane collector roads within residential neighbourhoods.

The stated purpose of the NTMP is: ***This policy document outlines procedures for initiating, reviewing and implementing neighbourhood traffic management plans in residential neighbourhoods to address safety concerns related to speeding and high volumes associated with traffic short-cutting through residential neighbourhoods. This policy shall apply to local and two-lane collector roadways located within primarily residential neighbourhoods.***

The NTMP acknowledges the primacy of the Canadian Guide to Neighbourhood Traffic Calming as the authoritative source of guidance on traffic calming policies. The acknowledgment is as follows:

“the Transportation Association of Canada (TAC) in collaboration with the Canadian Institute of Transportation Engineers (ITE) published in 1998 The Canadian Guide to Neighbourhood Traffic Calming. It provides guidance for transportation professionals in Canada on the use, application, and recommended design standards for various physical traffic calming measures. The guide was designed to ensure uniformity in application of traffic calming measures throughout Canada, minimize liability and maximize safety. This policy {the NTMP} is intended to define how and when the City of Guelph will apply material contained in the Canadian Guide to Neighbourhood Traffic Calming”.

The acknowledgement of the role of the CGNTC in providing guidance to the content of the NGTC mentions the role of the CGNTC in recommending design standards for various physical traffic calming measures. The NGTC does not explicitly identify the important role of the CGNTC in guiding attention to the proper purpose for traffic calming. The stated chosen purpose of the CGTC - ***to address safety concerns related to SPEEDING AND HIGH VOLUMES ASSOCIATED WITH TRAFFIC SHORT-CUTTING THROUGH RESIDENTIAL NEIGHBOURHOODS*** is directly based on the CGNTC. The current version of the CGNTC, renamed as the Canadian Guide to Traffic Calming (2018) begins with the following two sentences:

“Traffic calming is the broad term used to describe the process and measures used by road authorities to address concerns about the behaviour of motor vehicle drivers travelling on streets within their jurisdiction. Typically, the concerns are about SPEED AND/OR SHORT-CUTTING TRAFFIC”.

- (3) **2012 - Neighbourhood Traffic Management Policy Recognition Added to the Official Plan**
OPA 48, the current Official Plan for Guelph was adopted by City Council in 2012. The following section was added to the Official Plan to acknowledge the City’s policy on traffic calming:

5.6.5 Where necessary, traffic calming measures shall be incorporated into the design of the street network in accordance with the City’s Neighbourhood Traffic Management Policy, or successor thereto.

Summary and Conclusion

The City of Guelph was an early adaptor of, and remains committed to, the Livable Streets policies now contained in the Canadian Guide to Traffic Calming and the City’s Neighbourhood Traffic Management Policy. The core purposes of the Livable Streets policies are to reduce or eliminate the degradation of amenity of local and collector streets created by speeding and/or by high volumes of cut-through traffic on local or collector streets.

Epilogue on Speed and Volume as Criterion for Intervention for Traffic Calming

The technical literature on the negative impacts of traffic on neighbourhood liveability distinguishes between speed and volume of traffic as factors that can cause degradation of livability in neighbourhoods. It is good to start a discussion of the need to separate speed and volume when considering neighbourhood traffic calming with a reminder that traffic calming is a distinct subcategory of activity within the more general category of road safety. The context for traffic calming as it has been practiced for the last fifty years is the neighbourhood. The focus of traffic calming is to enhance the lives of neighbourhood residents as they go about their neighbourhood-based activities i.e. moving about the neighbourhood and interacting with their neighbours and their neighbourhood environment.

The speed of vehicles is one of the two traffic characteristics that can degrade liveability. The term speeding is operationally expanded to cover other aspects of driver behaviour that raise safety concerns (tailgating, disregarding stop signs, failure to yield, distracted driving). Concern about speeding applies equally to all drivers with no distinction between neighbourhood residents and non-resident drivers. There are a large set of possible traffic calming measures that are specific to achieving a reduction in speeding and other destructive driving behaviour.

The other traffic characteristic that can degrade liveability is volume of traffic. The technical literature distinguishes between the negative impact of traffic depending on whether the traffic is through traffic or locally-generated traffic. The finding is that neighbourhood residents find through traffic to be more damaging to the enjoyment of neighbourhood living than local traffic.

There are two reasons for the finding that traffic concerns are predominantly about through traffic. The first is that the spatial pattern of local, collector and arterial roads that has been used for new development of residential subdivisions over the last 50 results in traffic counts from local traffic that seldom exceed 3000 vehicles/day, a traffic count that most residents find tolerable. Thus, if traffic is perceived to be a problem it is usually because through traffic is adding to the traffic count.

The second reason for not finding local traffic objectionable is that, if people are aware that all the traffic they observe is the result of their neighbours making trips, they are less likely to find the traffic bothersome. It is not reasonable for them to object to their neighbours making trips when they use the same neighbourhood streets to make trips.

As a result of the difference in neighbourhood perception of local and through traffic the Canadian Guide to Traffic Calming identifies the traffic volume component of traffic calming as the need to control excessive volumes of cut-through traffic. The CGTC has two separate lists of traffic calming measure, one list of measures to reduce speed, the other lists measures to reduce through traffic volumes. There is no overlap between the two lists.

In summary traffic calming always is conducted in the context of protection of liveability of neighbourhoods. There are two distinct problems dealt with in traffic calming. These are (1) Speed and (2) volume of cut-through traffic. Control measures to control speed are not effective in controlling volume so different measures are required if traffic volume is the problem.