All Way Stop Policy Review:

Introduction:

Council Resolution 1039/2004 directed the creation of a committee to review the current all way stop policy. Administration has performed a comparison of our All Way Stop Policy with a number of other all way stop policies elsewhere in Ontario. A chart was developed to compare these policies to see how they differ and if there are any other additional items that could be incorporated into the City of Windsor All Way Stop policy.

1) Traffic Volume Warrant:

Current Warrant:

i) Total vehicular volume from all directions = 250 veh/hr

ii) Combined vehicular and pedestrian volume crossing the main street = 150 units/hr

Or

iii) Pedestrian crossing the main street exceeds 200 (8hr. total)

The current volume levels for both vehicles and pedestrians are considerably more liberal than those in other municipalities. Some municipalities have removed the traffic volume number and changed it to a vehicle / cyclist / pedestrian unit figure. This figure would replace warrant "I" with units per hour from all directions. Administration recommends that the volume levels stay the same as they currently are in the policy. Administration would like to note that our volume levels are among the lowest in Ontario for Local Roads and they are the lowest for Collector Roads.

Other Municipalities Volume Warrants:

Municipality	Local Road	Collector Road
Halton	350	500
London	500	500
Ajax	350	500
Niagara	350	500
Toronto	250	500
Markham	350	350
Windsor	**250**	**250**

2) Directional Split:

Current Warrant:

Does not exist

This aspect of the policy deals with the direction of the traffic volume represented by a fraction for each direction either East West or North South. This fraction shows the percentage of traffic coming from each direction. For instance, if 70% of all traffic

through the intersection moves east – west and 30% of traffic is north – south then the split is 70/30. The intention of this is to ensure that the road with the higher traffic gets right of way priority. For instance, if a road that caries 90% of all through traffic intersects another that caries 10% of the total volume, then the delay to the major road is too significant to justify placing all way stop control. It is better to have an all way stop at a location where the intersecting road's volumes are more even. Most municipalities use a minimum directional split of 65/35. Administration is recommending a similar ratio be included in the updated policy.

Other Municipalities Directional Split Ratios:

Municipality	Directional Split
Halton	70/30
Ajax	70/30
Niagara	65/35
Kingston	65/35
Oshawa	60/40
Toronto	70/30
Markham	65/35
Windsor	**N/A**

3) Accidents Per Year:

Current Warrant:
An average of 3 accidents per year in the past 3 years preventable by the installation of an all way stop.

The number of accidents per year should be averaged out. Some years there may be more accidents than others and therefore will sway the effect. Most municipalities use an average of 4 accidents in the past 3 years figure. The Ministry of Transportation recommends that an average of 5 accidents per year be used to justify placement of an all way stop. Administration believes that the current use of 3 accidents is adequate and therefore should stay the same in the revised policy.

Other Municipalities Accident Warrant

Municipality	Average Accidents / Year
Halton	4
London	4
Ajax	4
Niagara	4
Oshawa	1
Pickering	4
Cambridge	4
Windsor	**3**

4) Transit Route / Truck Route

Current Warrant:
Does not exist

In progressive municipalities such as Halton, Pickering and Niagara, there is strict control over the placement of all way stops on transit routes and on truck routes. This is done mostly because of the noise, but also because larger vehicles use more fuel when stopping and starting. It is also important to note that unnecessary stopping wastes travel time for buses and trucks. These municipalities do not allow all way stops to be installed on bus routes or truck routes. The only time all way stops would be considered for either would be if the bus or truck route intersected with another bus or truck route, or if two collector roads intersected. Administration recommends that this feature be integrated into the revised all way stop policy.

Other Municipalities With Transit / Truck Route All Way Stop Bans
Halton – Total Ban on All Way Stops on Transit Routes and Truck Routes
Niagara – Total Ban on All Way Stops on Transit Routes and Truck Routes
Pickering – Total Ban on All Way Stops on Transit Routes and Truck Routes

Number of All Way Stops on Various Transit Routes in the City of Windsor
Transway 1C = 9
Crosstown 2 = 6
Central 3 = 11
Ottawa 4 = 13
Dominion 5 = 7
Dougall 6 = 4
Walkerville 8 = 11
Lauzon 10 = 11
Parent 14 = 3
Total = 75

5) Proximity to other Right of Way Controls

Current City of Windsor Policy:
Does not exist

A number of municipalities put a minimum distance between all way stop controls. As an example, if there was an all way stop at one end of the block, another could not be installed within a 250 metre radius around that all way stop. This also trains people that want to make certain turning movements to drive to the all way stop instead of short cutting through the neighbourhood to get to another all way stop location. Another goal of this is to limit the number of all way stops in any given neighbourhood to only the locations that absolutely require them. In Windsor's case, there are already a large number of all way stops in close proximity to each other. Administration recommends that this item be included in the All Way Stop Policy.

Other Municipalities Limits on the Proximity of other Right of Way Controls:

Municipality	Distance
Halton	250 metres (820 feet)
London	250 metres (820 feet)
Ajax	250 metres (820 feet)
Niagara	250 metres (820 feet)
Kingston	250 metres (820 feet)
Pickering	250 metres (820 feet)
Windsor	**N/A**

6) Speed Control

Current City of Windsor Policy:
Does not exist

A number of all way stop policies, namely those from Halton, London, Niagara and Kingston have a special section of their policy stating that all way stops must not and cannot be used as a speed control measure. In the traffic world, this is an absolute given, but to the lay man, the inclusion of this text in the policy would help to stem the number of all way stop requests that are directly linked to speed issues on roadways. All way stops are for the control of right of way only. Therefore administration recommends that wording be included in the revised policy noting the following:

All way stops are not to be installed for the purposes of speed control.
All way stops increase the street's mean (50^{th} percentile) and operating speeds after implementation (Stoney Creek, ON)
Installation of stops signs anywhere may result in increased noise from the braking and acceleration of vehicles and can therefore reduce the quality of life near them.
Unnecessary all way stops waste time and fuel and increase the amount of air pollution in the neighbourhood they are installed in.

Other municipalities that note in their policy that all way stops are not to be used for speed control:
Halton
London
Niagara
Kingston
Oshawa
Pickering
Cambridge

7) Authority to Approve All Way Stop Requests:

All way stop installations should be studied from a technical basis only. Other municipalities have recognized the political ramifications of these all way stop requests and have created special committees to handle them. The City of London currently employs a "Transportation Committee" of Council to perform the review and decision making process for these installations. Administration recommends that a similar committee of council be created to deal with All Way Stop installations in the City.

Because all way stops have become so much more of a political issue, Administration recommends that all way stop requests be handled through a transportation sub committee that can convene every three months to handle the requests for all way stops and to present the findings of all way stop studies. This will help to free council of the time burden regarding these requests and will help to limit to political volatility surrounding these requests.

Currently, the public canvases neighbourhoods to get petition support for an all way stop. Administration studies the need for the all way stops and reports to council with the findings. Administration recommends that the steps to which these requests are brought forward to administration be changed. We recommend that concerns about specific intersections are brought to a new transportation sub committee and that committee will determine if it is needed to direct administration to study the issue. The results would then be brought back to the transportation sub committee and they would decide on whether to place an all way stop at the location based on the policy process and whether the intersection meets the warrants.

Other Municipalities With Transportation Committees:
London
Markham

8) Environmental Concerns:

Unwarranted all way stops considerably increase air and noise pollution in a municipality. It is important to recognize that air quality and noise can adversely affect the enjoyment of properties surrounding all way stops. Below is some information regarding the environmental affects of all way stops.

A study performed in 1991 in the City of Toronto "… determined that removing 480 (unwarranted) stop signs would save nine million litres of gasoline and eliminate 21,000 tones of air pollutants, producing a 5.5 percent reduction in emissions by the year 2005."

Annual overall gasoline consumption and fuel costs associated with traffic at all way stop-signs are substantial: the additional gasoline consumed from one stop sign on a typical collector road is 25 litres per day. Ministry of Municipal Affairs and Housing

At a typical four way stop, the following emissions are released collectively, from all vehicles traveling through a stop each year:

657 kg of hydro carbons
8,760 kg of carbon monoxide
675 kg of nitrogen oxide
65,700 kg of carbon dioxide

Data Provided by the Ministry of Municipal Affairs and Housing