

**S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING**

Alderman D. Hodges, Chairman  
Alderman R. Jones, Vice Chairman  
Alderman B. Erskine  
Alderman L. Fox-Mellway  
Alderman P. Grier  
Alderman J. Kerr  
Alderman J. Lord  
Mayor A. Duerr, ex-officio

\*\*\*\*\*

**AGENDA FOR A MEETING TO BE HELD  
2000 FEBRUARY 15  
AT 9:30 A.M.  
ENGINEERING TRADITIONS COMMITTEE ROOM**

**NOTE: PLEASE RETAIN YOUR COPY OF THE AGENDA. THE REPORTS CONTAINED IN THIS AGENDA ARE SCHEDULED TO BE CONSIDERED BY COUNCIL ON 2000 MARCH 06. HOWEVER THE REPORTS WILL NOT BE REDISTRIBUTED AT THAT TIME.**

**NOTE: IN THE INTERESTS OF SAVING PAPER, THIS AGENDA CONTAINS THE TEXT OF THE REPORT MATERIAL ONLY. COPIES OF ATTACHMENTS REFERENCED IN THE MATERIAL, AS WELL AS ADDITIONAL COPIES OF THE REPORTS, MAY BE OBTAINED FROM THE RECORDS SECTION OF THE CITY CLERK'S DEPARTMENT AT A COST OF 50 CENTS PER PAGE. THE RECORDS SECTION IS LOCATED ON THE MAIN FLOOR OF THE ADMINISTRATION BUILDING (NORTH ENTRANCE).**

TTP2000-05                      CONFIRMATION OF THE AGENDA

**NEW BUSINESS**

TTP2000-06                      MEMORANDUM OF UNDERSTANDING – SARCEE TRAIL  
EXTENSION

TTP2000-07                      40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL  
ROADWAYS

**S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING**

Alderman D. Hodges, Chairman  
Alderman R. Jones, Vice Chairman  
Alderman B. Erskine  
Alderman L. Fox-Mellway  
Alderman P. Grier  
Alderman J. Kerr  
Alderman J. Lord  
Mayor A. Duerr, ex-officio

\*\*\*\*\*

**AGENDA FOR A MEETING TO BE HELD  
2000 FEBRUARY 15  
AT 9:30 A.M.  
ENGINEERING TRADITIONS COMMITTEE ROOM**

**NOTE: PLEASE RETAIN YOUR COPY OF THE AGENDA. THE REPORTS CONTAINED IN THIS AGENDA ARE SCHEDULED TO BE CONSIDERED BY COUNCIL ON 2000 MARCH 06. HOWEVER THE REPORTS WILL NOT BE REDISTRIBUTED AT THAT TIME.**

TTP2000-05                      CONFIRMATION OF THE AGENDA

**NEW BUSINESS**

TTP2000-06                      MEMORANDUM OF UNDERSTANDING – SARCEE TRAIL  
EXTENSION

TTP2000-07                      40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL  
ROADWAYS

**S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING  
TABLED/REFERRED AS AT 2000 FEBRUARY 15**

<b>ITEM</b>	<b>DATE TABLED OR REFERRED</b>	<b>SUBJECT</b>	<b>ETA</b>	<b>SOURCE OR ALDERMAN</b>
1. TTP99-60, Limited or Restricted Emergency Access	99/10/04 (Council)	Administration to provide report		Council
2. TTP TTP99-53, The City of Calgary Taxi Commission Bylaws and Regulations	99/09/13 (Council)	Taxi Commission, with the support of Administration, report to Council, through TTP, on the effectiveness and efficiency of the Taxi Commission and the industry as it pertains to bench-marking, performance measures, customer satisfaction and industrial satisfaction	'00 February	Council
TTP99-51, English Proficiency Testing	99/07/20 (TT&P)	Administration to report on methods of implementing oral and written English proficiency examinations, including contracting out (with SAIT, Mount Royal, Bow Valley), as part of the requirement of the taxi drivers to obtain or renew their licenses. Such report to include public satisfaction surveys and further information from other municipalities		Alderman Grier
3. TT&P96-36, Downtown Short-Stay Parking Study		Review policy for short and long stay parking and make recommendations for improvement	'00 March	Transportation

**S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING  
TABLED/REFERRED AS AT 2000 FEBRUARY 15**

4.	TTP95-28, The Calgary Downtown Parking and Transit Study	95/05/01 (Council)	That the Administration, in consultation with interested parties, prepare terms of reference to address the existing cash-in-lieu policy in the downtown and report to the 1995 December meeting of TT&P	'00 March	Planning & Building
5.	Calgary Smoking Bylaw – Calgary Transit Facilities	98/12/08 (NAP)	Report on the Calgary Smoking Bylaw – “no smoking” language as it relates to Calgary Transit facilities	'00 April	Alderman Longstaff
6.	TTP99-09, Inner City Transportation Study	99/03/08	Administration develop a strategy that would influence driver behaviours to create greater safety on our roads	'00 April	Council
7.	TTP99-23, Inner City Transportation Study (ICTS)	99/04/26 (Council)	Technical Review Panel and Process Manager to report on outstanding issues	'00 April	Council
8.	C99-86, Calgary Transit Fare Strategy – Phase 1, Seniors' Transit Passes	99/11/17 (BRC)	Administration to report on the issue of a fare strategy for senior citizens' transit passes.	'00 April	Alderman Hawkesworth

**S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING  
TABLED/REFERRED AS AT 2000 FEBRUARY 15**

9. NM99-19, Sound Attenuation	99/11/23 (BRC)	Administration to provide a report that includes: 1. A comprehensive plan that would see sound attenuation incorporated into The City's ten year capital and expenditure report (coming forward to Council later this year) that would provide for the construction of all outstanding sound attenuation locations on the current Noise Barrier Retrofit Program. 2. Address how all new and additional locations could be accommodated in a timely fashion.	'00 April	Alderman Kerr
10. C99-27, Funding of the Noise Barrier Retrofit Program	99/04/26 (Council)	Administration to report on review of additional ongoing sources of funding	'00 April	Council
11. C99-27, Funding of the Noise Barrier Retrofit Program	99/04/26 (Council)	Administration to report on review of current sound attenuation policies with respect to retrofit as to appropriateness	'00 April	Council
12. TTP99-21, Land Use Strategy, Anderson LRT Station	99/04/26 (Council)	Administration to report on consideration of underground/structured parking for all residential and commercial development on this site to ensure efficient land use	'00 April	Council
13. TTP99-22, Land Use Strategy, 146 Avenue LRT Station	99/04/26 (Council)	Administration to report on consideration of underground parking for all residential and commercial development on this site to ensure efficient land use	'00 April	Council

**S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING  
TABLED/REFERRED AS AT 2000 FEBRUARY 15**

14. TTP99-53, The City of Calgary Taxi Commission Bylaws and Regulations	99/09/13 (Council)	Taxi Commission, in consultation with the industry, provide a separate recommendation with respect to the regulation of shuttle services	'00 April	Council
15. TTP99-52 and LAB99-42, Structural Changes to the Taxi Commission	99/07/20 (TT&P)	Taxi Commission to report on consultation with public and taxi industry	'00 April	Alderman Hodges
16. Petition to Open Lanes in 7100 Block of 35 Avenue	99/04/06 (NAP)	Report on request to open back lane in 7100 Block of 35 Avenue	'00 May	NAP
17. TTP98-27, Noise Barrier Retrofit Program – 1998 Update	98/07/13 (Council)	Administration to update the Noise Barrier Retrofit Program and report back to TT&P after 1999 when further funding is allocated	'00 June	Transportation
18. TTP98-43, Calgary Transit Fare Collection Equipment	98/10/05 (Council)	Calgary Transit to report back to TT&P on status of current fare collection equipment and new fare collection technology	'00 June	Transportation
19. NM99-11, Residential Parking Zones	99/06/28 (Council)	Transportation Department to review current Residential Parking Policies to determine if changes are necessary	'00 June	Alderman Longstaff

**S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING  
TABLED/REFERRED AS AT 2000 FEBRUARY 15**

20.	TTP99-56, Special Needs Taxi Extension Criteria and Appeal Procedures	99/10/04 (Council)	Administration to provide follow-up report one year after implementation of Option B	'00 September	Council
21.	TTP97-28, Proposed Policy Revision for Residential Parking Zones A and B	97/07/14 (Council)	The Transportation Department to report back to TT&P after one year's experience	'00 October	Transportation
22.	TTP99-48, Alternative Street Design Standards – Progress Report	99/07/05 (Council)	Administration to continue to work cooperatively with the UDI on the development of alternative street design standards for local roads and alleys	'00 December on Rec. #3 '04 September on Rec. #5	Council
23.	TTP99-13, Crescent Heights Traffic Study & Peter's Drive-In	99/03/22 (Council)	Administration to report on the impact of the traffic flow mediations contained in Recommendation 3	'01 January	Council
24.	TTP99-43, University of Calgary/Foothills Hospital Transit Service Plan	99/07/05 (Council)	Transportation Department to undertake a one-year evaluation of the Service Plan	'01 January	Council
25.	TTP96-68, Amendments to the Transportation of Dangerous Goods Routes Bylaw 67M87	97/02/10	Recommendation 1c) be referred to the Administration to work with the community, Ward Aldermen and Corporate Properties Group in order to work on the design and upgrade of Peigan Trail and this not to be brought to the TT&P until the design and funding is in place	Sine Die (if and when funds are available)	Transportation

109

**S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING  
TABLED/REFERRED AS AT 2000 FEBRUARY 15**

26. C96-36, Barlow/Max Bell Park and Ride	96/07/22 (Council)	Administration enter into negotiations with the developer for the provision of shared use park and ride on the Fire Park site at the time of the proposed development and report the final solution achieved to Council through TT&P	Sine Die	Transportation
27. TTP93-55, Proposed Special (Project) Development Agreement with Dalhousie Station Ltd. – Bylaw 64Z92	93/07/05 (Council)	That the results of discussion with the Dalhousie and Varsity Communities regarding traffic mitigation measures be referred to TT&P on allocation of funds	Sine Die	Transportation

**NOTE:** Where an item relates specifically/predominantly to an individual Ward, the pertinent Alderman is listed. Otherwise, the Alderman who tabled/referred/moved the item is noted

ETA = the current expected date for the report to be before the Committee



**EXECUTIVE REPORT TO THE S.P.C.  
ON TRANSPORTATION, TRANSIT AND PARKING**

2000 FEBRUARY 15

101

**TTP2000-07 40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

**ISSUE:**

To review the feasibility of implementing a 40 km/h maximum speed limit on all "residential" roadways (not including "collector" or "major" classified roadways) within Calgary.

**RECOMMENDATION:**

**The S.P.C. on Transportation, Transit and Parking recommends that the Administration approach the Alberta Urban Municipalities Association (AUMA) to determine if there is a collective desire to ask the Province to amend the HTA by reducing the speed limit in urban centres from 50 km/h to 40 km/h.**

**BACKGROUND:**

On 1999 November 08, Council approved the following motion submitted by Alderman Fox-Mellway:

WHEREAS many residents are concerned with the speed at which vehicles are travelling in residential areas:

AND WHEREAS many resident and community associations are requesting a reduction to 40 km/h from our current standard urban speed limit of 50 kilometres per hour on residential roads, suggesting it is too fast where visibility is limited by curved roads and parked cars;

AND WHEREAS many other jurisdictions in Canada and the United States have reduced residential speed limits;

NOW THEREFORE BE IT RESOLVED that the Administration be directed to bring forward a detailed report on a 40 kilometre per hour speed limit for residential areas to Council through the S.P.C. on Transportation, Transit and Parking. Such report to include costs, process and evaluation from other jurisdictions that have implemented this change.

**40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

**INVESTIGATION:**

Most urban residential speed limits are set by provincial law. In Alberta, the regulations governing speed control are contained in the Alberta Highway Traffic Act (HTA). This Act is currently under review, and a new Traffic Safety Act and Regulations is scheduled to be released in 2001. The current HTA defines the basic speed rule in Section 69 as:

Notwithstanding any speed limit prescribed by or pursuant to this or any other Act, no driver shall drive at any rate of speed that is unreasonable having regard to all circumstances of the case, including without restricting the generality of the foregoing:

- a) the nature, condition and use of the highway,
- b) the atmospheric, weather or other conditions that might affect the visibility of the driver or the control of the vehicle,
- c) the amount of traffic there, then or that might reasonably be expected to be on the highway, and
- d) the mechanical condition of the vehicle or any equipment of the vehicle.

The standard maximum speed limits are defined in Section 70 of the Highway Traffic Act. Section 70 (2) states:

Except where a higher rate of speed is prescribed pursuant to section 5 or 14, no person shall drive in an urban area at a greater rate of speed than 50 kilometres per hour.

Section 14(2) of the Highway Traffic Act permits municipalities to set speed limits greater or less than the standard 50km/h speed limit in urban areas, however, any deviation from the unposted 50km/h urban speed limit must be signed with standard black and white regulatory speed limit signs.

In the United States, the standard urban maximum speed limit is 25 mph in most States, which is approximately equivalent to 40km/h.

**Establishing Appropriate Maximum Speed Limits:**

Numerous traffic engineering research reports have indicated that drivers tend to select speeds which they consider safe for the prevailing conditions rather than solely relying

#### **40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

on regulatory maximum speed limits. The speed of vehicles on a roadway depends, in general, on several conditions:

- Regulatory maximum speed limits
- Roadway conditions
- Access control
- Weather
- Physical characteristics of the road and its surrounding area (Roadway Geometrics)
- Driver capability/behaviour and comfort
- Traffic flow/presence of parked vehicles/pedestrian activity, bicycle factors
- Traffic control devices (stop and yield signs, traffic signals, other signs)

Usually these conditions are combined but any one factor may govern. Artificially low speed limits are therefore not likely to operate effectively. To be effective, the maximum speed limit should be consistent with prevailing topographical and development conditions and should be self enforcing.

Police enforcement has been the traditional approach to controlling speeds; however, research has shown that significant increases in enforcement levels are required to influence driver behaviour and the effects are relatively short lived. Appropriate maximum speed limits are the ones where the majority of drivers believe the Traffic Engineers have made an acceptable compromise between their mobility needs and the need to maintain a high level of road safety (1999 Edition, Geometric Design Guide for Canadian Roads Transportation Association of Canada [TAC]). Therefore, it is customary Traffic Engineering practice to establish maximum speed limits at the 85<sup>th</sup> percentile desired or running speed. This is the speed at which 85 percent of the drivers are travelling at or below. Speed limits set higher make very few additional drivers "legal" for each 10 km/h increment of speed increased. Conversely, speed limits set lower make a significant number of reasonable drivers "illegal" for each 10 km/h increment of speed decreased, place unnecessary burdens on law enforcement personnel, lead to lack of credibility of speed limits and lead to increased tolerance by enforcement agencies (1999 Edition, Geometric Design Guide for Canadian Roads, Transportation Association of Canada [TAC]).

#### **Relationship Between Speed, Safety and Stopping Sight Distance**

The speed of vehicles on a roadway is a critical factor that affects safety on urban roadways, particularly in terms of severity of collisions. However, there is not clear evidence that there is a relationship between speed and the probability of a collision

**40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

because collisions are complex events and generally cannot be attributed to one single factor. Researchers do believe that collision rates are more directly affected by speed variations. If all motorists were driving at the same speed, on any given roadway, the conflicts would be lower (October 1998, Speed Management and Roadway Environment, R.W. Sanderson, Transport Canada).

However, there is a mathematical exponential relationship (the force of impact increases as the square of speed) between speed and collision severity as shown in Figure 1.

**$K = \frac{1}{2} M(V)^2$**

**where K = Kinetic Energy Available**

**M = Mass (kg)**

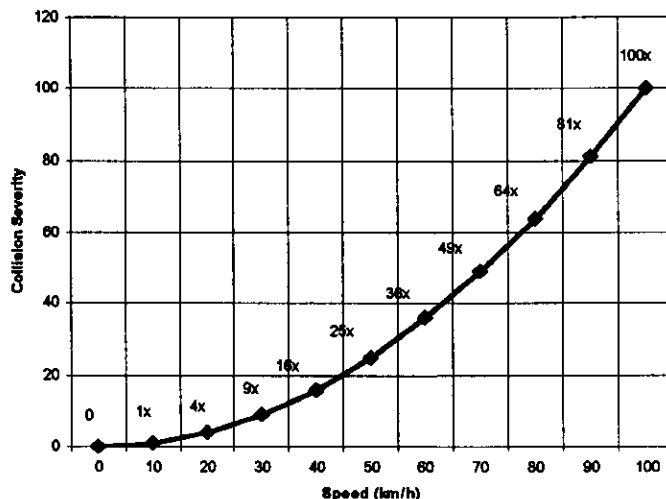
**V = Velocity (m/sec)**

For example, a 1000 kg vehicle travelling at 40 km/h on a residential roadway produces a kinetic energy of 61,605 kg m<sup>2</sup>/sec<sup>2</sup>. The same vehicle travelling at 50 km/h produces a kinetic energy of 95,220 kg m<sup>2</sup>/sec<sup>2</sup>. Therefore, a vehicle travelling at 50 km/h produces approximately 54 percent more kinetic energy as the same vehicle travelling at 40km/h.

Speed is the main factor that increases injury severity and the likelihood of fatal collision. The following graph (Figure 1) depicts the relationship between "Collision Severity" and "Speed".

**Increase in Collision Severity Using 10 km/h as the Baseline**

Figure 1



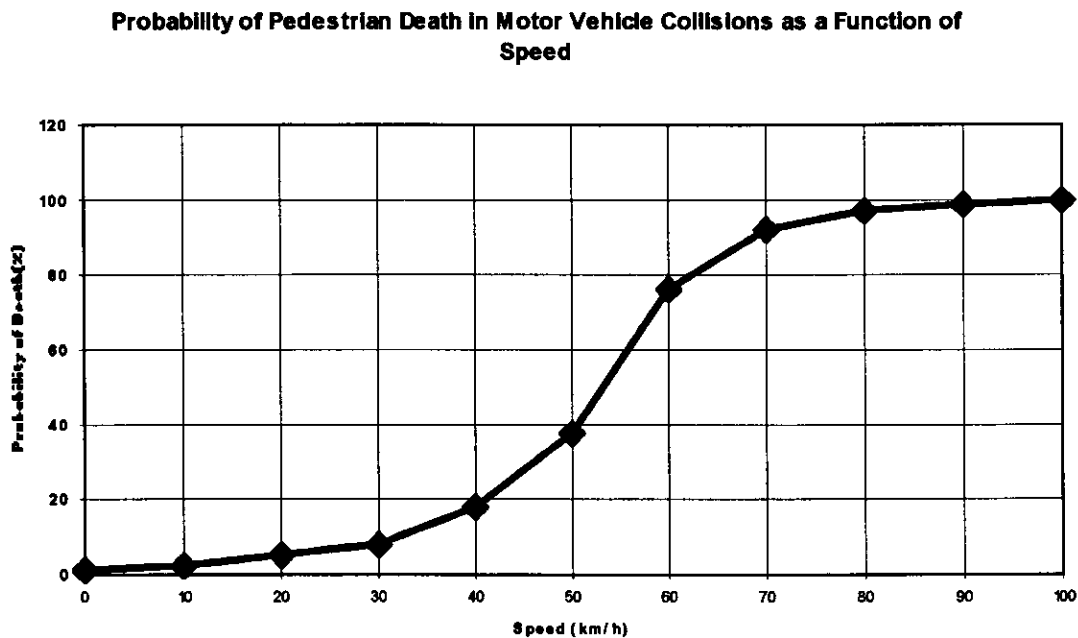
Source: Mission Possible, 1999

**40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

A collision at 50 km/h has a severity of approximately 25 times that of a collision at 10 km/h. A collision of 40 km/h has a collision severity of approximately 16 times that of a crash at 10 km/h.

The probability of a pedestrian fatality also increases exponentially with speed. For example, at a speed of 40 km/h, the probability of a pedestrian death is approximately 18 percent. At 50 km/h, the probability of a pedestrian death increases to approximately 40 percent. See graph (Figure 2) below:

Figure 2



Source: Helsinki, University of Technology, 1992

Another important engineering factor is stopping sight distance. Stopping Sight Distance (SSD) is the sum of the distance travelled during the perception and reaction time and the braking distance. Braking distance is the distance that it takes to stop a vehicle once the brakes have been applied. Table 1 gives the minimum stopping sight distance on level grade, on wet pavement, for a range of speeds. The highlighted (**bold**) numerals refer to the stopping distance statistics for 40km/h and 50km/h design speeds.

**40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

<b>TABLE 1</b>						
<b>Stopping Sight Distance for Automobiles and Trucks with Antilock Braking Systems</b>						
Design Speed (km/h)	Assumed Operating Speed* (km/h)	Perception and Reaction		Coefficient of Friction	Braking Distance (m)	Stopping Sight Distance (rounded) (m)
		Time (s)	Distance (m)			
40	40	2.5	27.8	0.38	16.6	45
50	47 - 50	2.5	32.7 - 34.7	0.35	24.8 - 28.1	60 - 65
60	55 - 60	2.5	38.2 - 41.7	0.33	36.1-42.9	75 - 85
70	63 - 70	2.5	43.7 - 48.6	0.31	50.4 - 62.2	95 - 100
80	70 - 80	2.5	48.6 - 55.5	0.30	64.2 - 83.9	115 - 140
90	77 - 90	2.5	53.5 - 62.5	0.30	77.7 - 106.2	130 - 170
100	85 - 100	2.5	59.0 - 69.4	0.29	98.0 - 135.6	160 - 210
110	91 - 110	2.5	63.2 - 76.4	0.28	116.3 - 170.0	180 - 250
120	98 - 120	2.5	68.0 - 83.3	0.28	134.9 - 202.3	200 - 290
130	105 - 130	2.5	72.9 - 90.3	0.28	155.0 - 237.6	230 - 330
<p><b>Note: *</b> Range of assumed operating speed is from average running speed for low-volume conditions to design speed.</p>						
<p>Source: 1999 Edition, Geometric Design, Guide for Canadian Roads</p>						

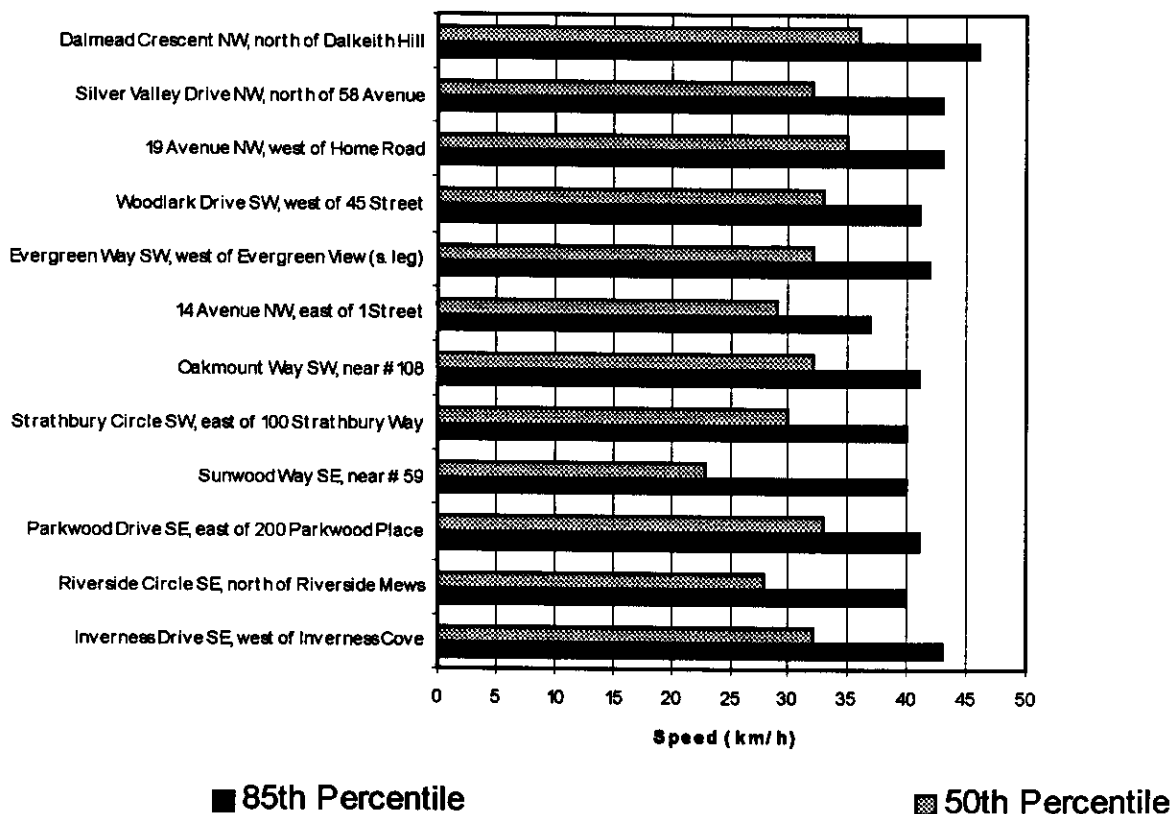
Therefore, according to Table 1, a vehicle travelling at 40 km/h requires 15m to 20m less to stop than a vehicle travelling at 50km/h. However, it should be noted that travel speed is not the only factor that affects traffic safety. The Administration is currently involved in a pilot project, Operation Collision Reduction, which is directed at overall traffic safety and addresses all driver behaviours, not just speed. This pilot project will be evaluated for its effectiveness and recommendations on expanding this program will be brought forward to a meeting of the S.P.C. on Transportation, Transit and Parking later this year.

**85<sup>th</sup> Percentile Desired/Operating Speeds on Residential Roadways**

A radar speedometer and an electronic speed traffic classifier were used to measure and record spot speeds of vehicles on 12 randomly selected residential roadways (as defined in Bylaw 41M95) to determine actual operating speeds. The 12 roadways selected represent a cross section of residential roadways in new and old subdivisions in Calgary. Figure 3 summarizes the speed statistics that were recorded at each of the locations.

**40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

**City of Calgary Speed Study Results - Residential Roads**



**Figure 3**

Figure 3 indicates that the average 85<sup>th</sup> percentile desired or running speed on the “residential” roadways studied was 41 km/h. The 41km/h represents the “desired speed” which is the speed drivers wish to travel, determined by a combination of motivation and comfort. Reducing the speed limit to 40 km/h would not typically alter the average 85th percentile desired or running speeds on these types of roadways.

For “collector” classified roadways in Calgary, experience has shown that typically, the 85<sup>th</sup> percentile desired or running speeds range between 50 km/h and 60km/h. Therefore, a 50 km/h maximum speed limit on these types of roadways is appropriate and meets drivers’ expectations. However, “Collector” roadways such as Elbow Drive, 33 Avenue (Crowchild Trail to 14 Street S.W.) and Sifton Boulevard may be streets that would be targeted for special 40 km/h speed zoning but only if there is strong

### **40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

justification and traffic calming measures were instituted and backed up with a monitoring program.

If a comprehensive 40 km/h maximum speed limit is established on "residential" classified roadways, consideration may be given to the elimination of the 30 km/h speed limit zones for school and playground areas. There is a body of evidence that these speed zones are characterized by poor compliance, and places the Calgary Police Service in the position of deploying resources at unwarranted locations. A more effective approach might be to establish a "community safety zone" in high pedestrian crossing areas. The maximum 40 km/h residential limit would be retained but the speeding fines could be doubled in these areas. This approach would have to be discussed with the province and approved as part of the new Traffic Safety Act and Regulations.

### **Roadway Cross Section (Comparison between "Residential" and "Collector" Roadways)**

Attachment 1 illustrates the differences in the roadway cross sectional elements between a "Residential" and a "Collector" roadway (as defined in Bylaw 41M95) with parking on both sides. The driving lanes on a residential roadway are 2.5m wide and the parking lanes are 2.0m wide. On collector roadways, the driving lanes are 3.5m wide and the parking lanes 2.25m wide. As mentioned previously, drivers are tending to select lower operating speeds on the narrower "residential" roadways even though the speed limit is 50 km/h.

### **Experience In Other Municipalities in Canada**

A survey was mailed out to 16 municipalities in Canada to determine their experience with establishing maximum residential speed limits. Only one city didn't respond. Table 2 is a summary of the responses.



**EXECUTIVE REPORT TO THE S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING**

**TTP2000-07  
PAGE 9**

**40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

**TABLE 2**

<b>40 km/h MAXIMUM SPEED LIMIT SURVEY</b>				
<b>CITIES SURVEYED</b>	<b>CURRENT RESIDENTIAL SPEED LIMIT (km/h)</b>	<b>POSTED OR UNPOSTED</b>	<b>EVER CONSIDERED LOWER THAN 50 km/h</b>	<b>GENERAL COMMENTS</b>
Kitchener	50	Posted	Yes	Use max 40 km/h when signals flashing at School Zones.
Surrey	50	Unposted	Yes	Use 30 km/h School Zones/Playground Zones/Sub-standard roads.
Vancouver	50	Unposted	Yes	Transportation Plan directs that the speed limit be 40 km/h. Currently trying to change HTA to implement 40 km/h speed limit.
Edmonton	50	Unposted	Yes	Surveyed residential speed limits as part of Transportation Master Plan. Results indicated 30% preferred 30 km/h, 27% preferred 40 km/h and 28% preferred 50 km/h.
Toronto	50	Unposted	Yes	Toronto has many 40 km/h roads, which were primarily politically established. Presently trying to agree on uniform technical criteria.
Ottawa	50	Unposted	Yes	Ottawa's adjacent communities sign 40 km/h speed limits on Residential roadways (Kanata, Nepean, Glouster)
Montreal	50	Unposted	Yes	Attempting to change HTA to implement 40 km/h residential speed limit.
Winnipeg	50	Posted	No	40 km/h speed limit is an unrealistic speed. Speeds will not change.
Mississauga	50	Unposted	Yes	40 km/h speed limits on residential and minor collectors adjacent to schools and on sub-standard roadways.
Regina	50	Unposted	Yes	40 km/h speed limits in School Zones only.
Oakville	50	Unposted	No	40 km/h speed limits in School Zones only.
Hamilton	50	Posted	Yes	A few locations have full time 40 km/h speed limits.
Victoria	50	Unposted	Yes	If road design/geometrics require reduced speed limits to calm traffic.
Saskatoon	50	Unposted	No	40 km/h vehicle speeds on local roadways while 50 km/h speeds on collector roadways is what most drivers select as desirable.
Red Deer	50	Unposted	No	30 km/h for Playground Zones as per HTA.

The survey revealed that two cities - Montreal and Vancouver - are in the process of having their provincial legislation revised to reduce the unposted urban maximum speed limit from 50 km/h to 40 km/h. A number of other municipalities are considering reduced speed limits on residential streets that have reduced roadway geometrics.

**Calgary Police Service's Comments**

Attachment 2 is a copy of a letter dated 2000 January 31 received from Christine E. Silverberg, Chief of Police, Calgary Police Service summarizing her comments relating to the feasibility of implementing a 40 km/h standard urban maximum speed limit.

# EXECUTIVE REPORT TO THE S.P.C. ON TRANSPORTATION, TRANSIT AND PARKING

TTP2000-07  
PAGE 10

## 40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS

### Law Department's Comments

The Law Department indicated that if a 40 km/h maximum speed limit was instituted for "residential" roadways and the HTA wasn't changed, then the "residential" streets would have to be posted with 40 km/h maximum speed limit signs at each intersection. However, if the HTA was revised and the standard maximum urban speed limit was 40 km/h, then any deviations from the unposted 40 km/h maximum speed limit must be signed with standard black and white regulatory speed limit signs.

### Provincial Government's Comments

The Provincial Government was contacted and asked to comment on the feasibility of revising the legislation regarding the unposted 50 km/h standard urban speed limit to 40 km/h. They indicated that while they were reviewing the new Traffic Safety Act and Regulations last year, (this act will replace the Highway traffic Act in 2001), The City of Calgary was the only municipality that had approached them with a written request to lower the unposted speed limit in urban areas to 40 km/h. Therefore, they did not proceed with the revision. However, they did indicate that they would re-evaluate this request if the Alberta Urban Municipalities Association (AUMA) would come forward with a letter indicating their support for the proposal.

### ALTERNATIVES:

#### Alternative 1

Work with the AUMA to request the Provincial Government revise the unposted 50 km/h standard urban maximum speed limit to 40 km/h as contained in the Traffic Safety Act and Regulations and post 50 km/h maximum speed limits on all "collector" roadways as defined in Bylaw 41M95; or

#### Alternative 2

Post regulatory 40 km/h maximum speed limit signs on all "residential" roadways as defined in Bylaw 41M95; or

#### Alternative 3

Do nothing (Status Quo). Retain the 50 km/h standard urban maximum speed limit as contained in the Traffic Safety Act and Regulations and continue with overall traffic

## **40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**

safety programs such as Operation Collision Reduction, addressing all aspects of traffic safety, not just speed.

### **FINANCIAL IMPACT:**

The estimated costs for implementing the three alternatives are as follows:

**Alternative 1 - Revise the Traffic Safety Act and post "collector" roadways with 50 km/h maximum speed signs.** Estimated Cost: - \$1.7 Million. \*

**Alternative 2 - Post all "residential" roadways with 40 km/h maximum speed limit signs.** Estimated Cost - \$4.3 Million. \*

**Alternative 3 - Retain the unposted 50 km/h standard urban maximum speed limit as contained in the Traffic Safety Act and Regulations.** Estimated Cost - Zero (Nil).

\*Note: These estimated costs do not include ongoing sign maintenance and replacement costs. Currently, there has been no funds allocated in the Roads Capital Budget to do the work outlined in the alternatives 1 and 2.

### **CONCLUSION:**

In the past, the Alberta Government has been reluctant to revise the unposted 50 km/h standard urban maximum speed limit to 40 km/h as specified in the Alberta Highway Traffic Act. This was primarily because The City of Calgary was the only municipality that had approached them with such a request. Recent discussions with the Province have indicated that they would be more receptive to revising the standard urban unposted speed limit to 40 km/h if the AUMA would come forward with a letter indicating support for this initiative.

The result of a survey of 16 municipalities in Canada indicated that two cities; Montreal and Vancouver are in the process of having their provincial legislation revised to reduce the unposted urban maximum speed limit from 50 km/h to 40 km/h.

The engineering facts presented in this report indicate that a 40 km/h maximum speed limit on "residential" roadways is more or less consistent with the desired operating speeds. The spot speed studies conducted on the "residential" roadways indicate that the desired operating speed chosen by most motorists is approximately 40 km/h on

**40 KM/H MAXIMUM SPEED LIMIT ON RESIDENTIAL ROADWAYS**


“residential” roadways in Calgary. If the unposted 50 km/h standard urban maximum speed limit is reduced to 40 km/h then “collector” roadways should retain a 50 km/h maximum speed limit and would have to be posted with 50 km/h maximum speed limit signs.

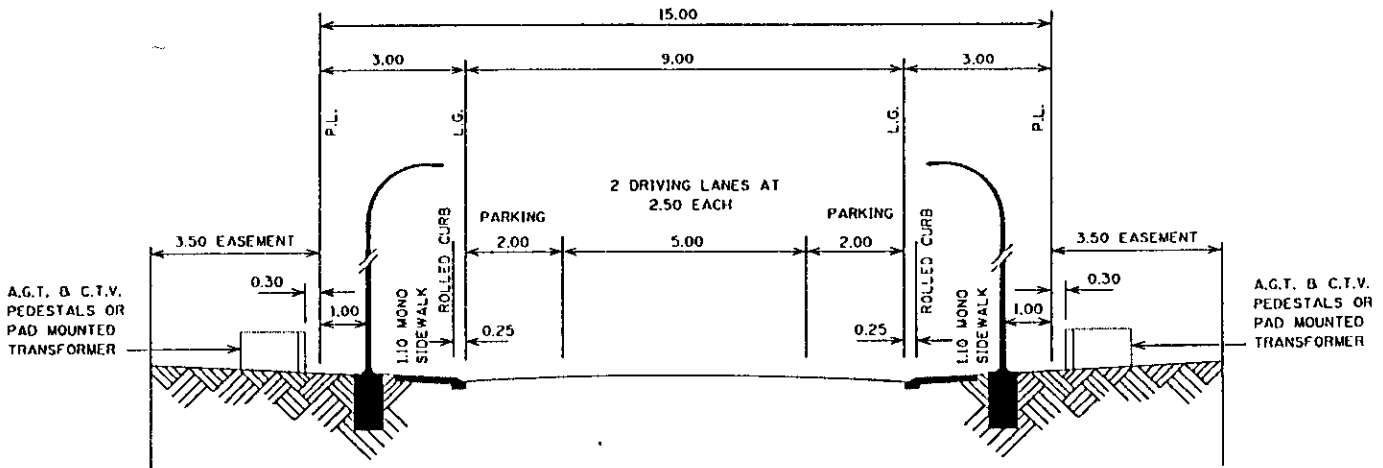
**ATTACHMENTS:**


1. Roadway Cross Section Comparison Between Residential and Collector Roadways
2. Chief Christine E. Silverberg, Calgary Police Service. Letter dated 2000 January 31

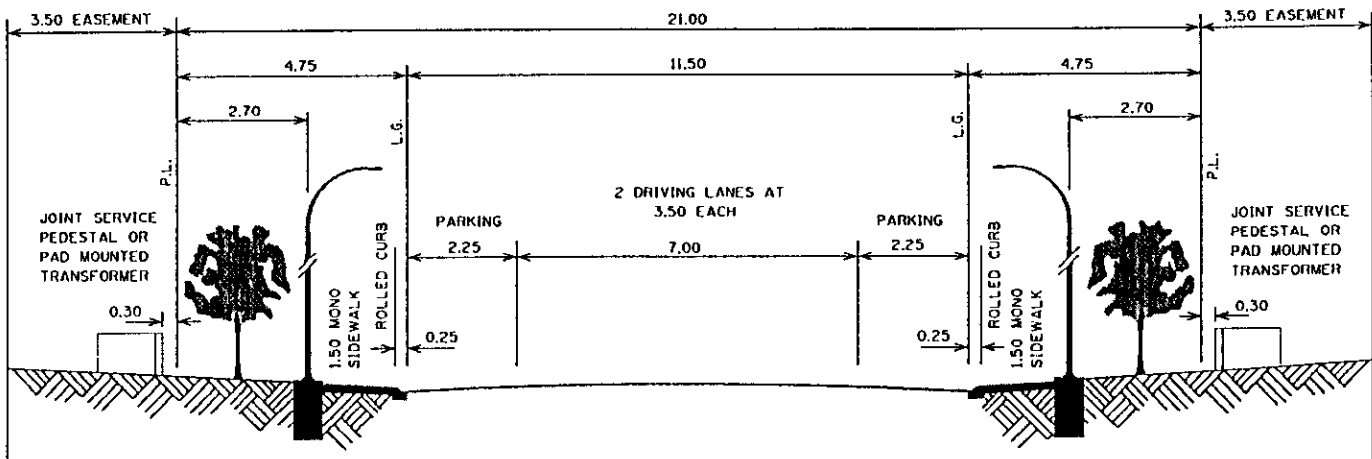
# Roadway Cross Section Comparison Between Residential and Collector Roadways

TTP2000-07  
ATTACHMENT


**THE CITY OF CALGARY**  
 ENGINEERING & ENVIRONMENTAL  
 SERVICES DEPARTMENT  
**RESIDENTIAL - PARKING**  
 BOTH SIDES  
 15.00m R/W 9.00m ROAD




**THE CITY OF CALGARY**  
 ENGINEERING & ENVIRONMENTAL  
 SERVICES DEPARTMENT  
**COLLECTOR**  
 PARKING BOTH SIDES  
 21.00m R/W 11.50m ROAD





Community and Police  
Working Together

**DATE:** 2000 January 31

**TO:** Dennis R. Danchuk, Manager  
Traffic Operations  
Transportation Department (#8190)

**FROM:** Chief Christine E. Silverberg  
Office of the Chief (#900)

**RE:** Maximum Speed Limits on Residential Roadways

---

Thank you for your memo of December 22, 1999, in which you requested written comments to a report on the feasibility of implementing a 40 km/h maximum speed limit on all residential roadways within Calgary. I would like to assure you that, in consultation with my senior staff, I have fully reviewed this matter and have given it careful consideration.

In researching our response to your request, we analyzed information from the Traffic Service Request database. Our analysis indicates that the problem of speeding on most residential streets tends to occur on the collector and feeder roadways as opposed to the inner residential streets themselves. While respecting how important it is for residents to have the utmost confidence that the Calgary Police Service is responding to their concerns in an appropriate manner, it is our considered opinion that following an analysis of the Traffic Service Requests database, the evidence does not support the conclusion that unposted speed limits in residential areas significantly increase speeding or speed-related collisions.

Due to the time constraints for fulfilling your request, in addition to the fact that our current technology does not allow us to readily access and compile data, we were unable to determine the actual number of complaints regarding excessive speed on residential roadways. However, we did search a portion of the database manually and were able to ascertain the following estimate with respect to the extent of the problem.

1. In total, there were 1561 speeding complaints on the Traffic Service Request database available for examination. Of this total, our analysts reviewed 434 complaints from March 1999 onward. A total of 279 complaints, related to speeding problems, were identified in residential zones where 50 km/h signs were posted. A further 155 complaints were identified in residential zones where signs were not posted.

2. Of the 279 total complaints, 101 were found to concern streets in residential locations. The remaining locations were for major roadways, such as Elbow Drive, or feeder roadways. Thirty-six per cent of the complaints for residential streets have been assigned but not yet resolved. Forty-three per cent have been returned citing that no discernable problem exists. Seven per cent have been returned stating that a slight to moderate problem exists and that steps are being taken to resolve the problem. The data collected by The City of Calgary's Traffic Operations Division suggests that, in residential areas where a speed limit is not posted, the 85<sup>th</sup> percentile speed is approximately 41-42 km/h. This information suggests that the problem of speeding along residential streets does not seem to be severe or widespread.

The greatest number of speeding complaints along residential streets concern playground and school zone locations. These locations have posted 30 km/h speed limits which are enforced by both conventional policing methods and with photo radar. A total of 33,163 charges were laid during 1999 through active enforcement occurring within these zones. This number represents nine per cent of all moving violations issued in that year and approximately 12.4 per cent of all photo radar violations.

Furthermore, 15 per cent of complaints concerned motorists speeding on roadways which allowed them to take shortcuts to avoid construction zones on busy arteries. Of this 15 per cent, 86 per cent were complaints regarding the Douglasdale area. Before construction began on Deerfoot Trail, this southwest community was often noted as a problem area for traffic violations. This problem is due to the large number of motorists entering and leaving Douglasdale via the feeder roads of Douglasdale Blvd. and Douglas Park Blvd. during the morning and afternoon rush hours. The Traffic Section and District 6 have both dedicated many hours to resolving this situation through enforcement and by working closely with the community.

Since January 1, 1996, four fatalities and three collisions involving serious injury have occurred on roadways which would be governed by a 40 km/h speed limit. However, speed was not found to be a factor in any of these incidents. With the exception of one incident where a motorist suffered a heart attack, these accidents all involved young children. Three incidents involving children were the result of tragic accidents in which the children were backed over by vehicles driven by a neighbour or family member. Two incidents involved children who did not stop at an intersection while riding their bicycles. In the remaining incident, a 6-year-old child ran out from between parked cars into traffic.

The posting required to secure the conviction of a motorist exceeding the 40 km/h limit would be the same as that required for playground zones and school zones

and would have to include alleyways. If officers are to successfully enforce the speed limit, signs will have to be posted on every block and at each intersection in each direction. Posting the appropriate number of signs would also result in a considerable cost to The City of Calgary.

An alternative to posting signs adequate for enforcing changes to the speed limit, is for the Province of Alberta to set the unposted speed limit in residential areas at 40 km/h and post every other roadway at the specific prescribed limit. However, the Province has shown a disinclination to follow this course of action, as demonstrated in the development of the proposed Traffic Safety Act. Furthermore, while evidence gathered from our own internal sources, as well as The City of Calgary's Traffic Operations Division, does not suggest that excessive speed is a problem on residential streets, a speeding problem may be created artificially by lowering the speed limit.

Regular enforcement within residential zones must be considered in light of other demands for traffic enforcement within the community. If 40 km/h speed limits are posted, we must consider the likelihood that more requests for enforcement are likely to follow. The ability of district personnel to respond to these requests must be considered in light of other priorities. Should the Police Service feel compelled to dedicate already limited resources toward addressing this issue, other more serious traffic enforcement matters may be negatively affected.

I would like to clarify that in no way am I suggesting that residential areas should not be monitored on a regular basis for speeding. Clearly, regular monitoring is the only way to ensure compliance of traffic laws. I also recognize that other jurisdictions employ lower speed limits than those in effect in Calgary. I would like to reiterate, however, that the evidence shows that Calgary is currently not experiencing problems with motorists driving at speeds in excess of the 50 km/h speed limit in residential areas.

Again, I would like to thank you for bringing this matter to my attention and for inviting the Calgary Police Service to have input on the report being prepared for City Council regarding speed limits on residential streets. Should you require additional information on this matter, please do not hesitate to contact Inspector Powell of the Calgary Police Service at 295-7900.



Christine E. Silverberg  
CHIEF OF POLICE



# 40 km/h Speed Limit Proposal

presented by

Rodney Case

President Inverness Residents Association

Mckenzie Towne

# Points of Agreement

Highway Traffic Act includes

- Urban Speed is 40 km/h
- Municipality can set speeds other than 50 km/h
- There are provisions for signing

The City has 40 km/h zones

Many groups want more zones

Some groups want to slow trunk routes

Issues around fairness/ precedence are key

# Points of Disagreement

This is calls for a city wide change

Fair and reasonable equates to identical

Highway Traffic Act signage is as restrictive as suggested

# Why the need for a change

Mckenzie Towne is unique

- short blocks
- 300% more intersections than typical
- Speed profile is very low 25-40 km/h
- Street and Intersection design raises risk level

**THIS IS A SAFETY ISSUE**

# The Expectations

3 meetings with 200-350 residents

- Remains a key issue for 18 months

4th level of democratic will/ differentiation

- Reinforced by City master plan and daily admin

McKenzie Towne has broken all other rules

- just one more

# A Proposed Solution

Available to the following:

- Urban clusters defined by few exit/entrances
- Affect only local residential traffic
- Contain no inter-community connectors

Use Bylaw provisions to establish 40 km/h urban clusters

Use 40 km/h signs similar to 50 km/h at city entrances

Must be supported by petition drive of 50% of households in cluster

# Closing Remarks

Prevalent and perennial issue

“No Brainer” for “Small Town”  
Is becoming very emotional

Is an Issue of “Political Will”  
not a “technical issue”