



**TO:** GENERAL COMMITTEE

**SUBJECT:** MAPLEVIEW DRIVE EAST SPEED LIMIT REVIEW

**WARD:** 9 AND 10

**PREPARED BY AND KEY CONTACT:** M. KAVECKAS, SENIOR TRANSPORTATION OPERATIONS TECHNOLOGIST, EXT. 4876

**SUBMITTED BY:** M. BANFIELD, RPP, DIRECTOR OF DEVELOPMENT SERVICES

**GENERAL MANAGER APPROVAL:** B. ARANIYASUNDARAN, P. ENG., PMP, GENERAL MANAGER OF INFRASTRUCTURE AND GROWTH MANAGEMENT

**CHIEF ADMINISTRATIVE OFFICER APPROVAL:** M. PROWSE, CHIEF ADMINISTRATIVE OFFICER

**RECOMMENDED MOTION**

1. That Rates of Speed By-law 2002-191, Schedule 'C' "Authorized Rates of Maximum Speed – 60 Kilometres per Hour" be amended by deleting the following:

<u>Street</u>	<u>From</u>	<u>To</u>
"Mapleview Drive East	Bayview Drive	Huronia Road"
"Mapleview Drive East	CNR Tracks East of Yonge Street	East City Limit"
"Molson Park Drive	Mapleview Drive West	Bayview Drive"

2. That Rates of Speed By-law 2002-191, Schedule 'C', "Authorized Rates of Maximum Speed – 60 Kilometres per Hour" be amended by adding the following:

<u>Street</u>	<u>From</u>	<u>To</u>
"Mapleview Drive East	Highway 400	East City Limit"

**PURPOSE & BACKGROUND**

3. Staff in the Development Services Department have received a request from the Ward 9 Councillor to investigate the feasibility extending the 60km/h speed limit on Mapleview Drive East from Huronia Road to Yonge Street.
4. Mapleview Drive between Highway 400 and Bayview Drive was formally known as Molson Park Drive. Following the closure of Molson Park, the street name was changed to Mapleview Drive East. As a housekeeping matter, the Rates of Speed By-law 2002-191 is required to be updated to reflect the street name change.
5. The existing maximum posted speed along Mapleview Drive East between Huronia Road to approximately 480 metres east of Yonge Street is 50 km/h. All other segments of Mapleview Drive East have a maximum posted speed of 60 km/h. Please see attached Appendix "A" for the existing maximum posted speeds along Mapleview Drive East.

6. Mapleview Drive East is an east/west arterial road located in the south end of the City of Barrie. West of Yonge Street, Mapleview Drive East has a two-lane (per direction) urban cross section with a centre two-way left turn lane. There are sidewalks on both sides with a transition to a multi-use path on the north side beginning from Huronia Road to Yonge Street. East of Yonge Street, Mapleview Drive East reduces to one-lane (per direction) with a sidewalk on the north side. The sidewalk transitions to a multi-use path 185 metres west of Prince William Way and ends approximately 90 metres west of Nottingham Road.
7. Mapleview Drive East in the study area consists of various land uses. From Bayview Drive to Country Lane/Stunden Lane is primarily Environmental Protection Area (EP), Residential, with some Commercial and Light Industrial land. East of Country Lane/Stunden Lane is primarily Residential and EP. Maple Ridge Secondary School is located on the south side of Mapleview Drive East at Prince William Way and a future elementary school will be located on the north side at Dean Avenue.

### **SPEED LIMIT ANALYSIS**

8. The main purpose of determining an appropriate speed limit is to strike a balance between safety and vehicular mobility. Drivers adjust their speed based on their perception of a safe speed rather than the speed limit unless heavy enforcement is present for a long period of time. The major objective of setting an optimal speed limit is to decrease speed differentials along the roadway. This improves operations and safety and contributes to lowering greenhouse gas emissions through avoiding unnecessary acceleration and deceleration and allow for more efficient progression along the corridor.
9. Staff consulted with the engineering firm CIMA+ to conduct a speed limit review of the Mapleview Drive East corridor between Huronia Road and the east City limit to determine if any changes to the maximum posted speed could be recommended.
10. To determine the maximum posted speed limit, CIMA+ used the Transportation Association of Canada (TAC) Automated Speed Limit Guidelines. This guideline is applicable to all types of roadways in Canada and is systematic and consistent. A recommended posted speed limit or "starting speed value" is established from the road classification (i.e., urban undivided arterial) and a total risk score is calculated based on road geometry, lane widths, pedestrian and cyclist exposure, intersections, access density, etc. The starting speed value is compared to the total risk score and the risk score is used to determine the maximum posted speed limit.

11. Staff have summarized the results from CIMA+ speed limit review using the Automated Speed Limit Guideline forms. The results are shown below:

<b>Automated Speed Limit Guideline Results - Mapleview Drive East</b>					
<b>From</b>	<b>To</b>	<b>Urban/Rural</b>	<b>Total Risk Score</b>	<b>Starting Speed Value</b>	<b>Current Speed Limit</b>
Huronia Road	Madelaine Drive	Urban	35	70km/h	50km/h
Madelaine Drive	Yonge Street	Urban	40	70km/h	50km/h
Yonge Street	PXO	Urban	45	70km/h	50km/h
PXO	330m W of Prince William Way	Urban	46	70km/h	60km/h
330m W of Prince William Way	90m W of Nottingham Road	Urban	40	70km/h	60km/h
90m W of Nottingham Road	20th Sideroad	Rural	46	60km/h	60km/h

12. Results of The Automated Speed Limit Guideline – starting speed limits are compared against the risk levels from the TAC manual. Corridors are compared to their associated charts through either urban or rural cross sections. See baseline charts below:

<b>TAC Urban Arterial Roads Posted Speed Based on Risk Score</b>			
	<b>70km/h</b>	<b>60km/h</b>	<b>50km/h</b>
Minor Arterial	33 and lower	34 to 56	57 and higher
Major Arterial	29 and lower	30 to 48	49 and higher

<b>TAC Rural Arterial Roads Posted Speed Based on Risk Score</b>		
<b>70km/h</b>	<b>60km/h</b>	<b>50km/h</b>
33 and lower	34 to 56	57 and higher

13. Based on road characteristics of Mapleview Drive East, all corridors produced a starting speed limit of 70km/h. The risk scores produced numbers from 35 to 46. These risk scores generated a recommended maximum posted speed limit of 60km/h.
14. Based on analysing existing speed limits, site investigations and reviewing the CIMA+ speed limit review of comparing the recommended starting speed limit by road characteristics to the recommended posted speed limit based on risk score. Staff recommend the maximum posted speed limit of Mapleview Drive East from Huronia Road to east of Yonge Street increases from 50 km/h to 60 km/h. Staff also recommend the maximum post speed limit of 60 km/h east on Yonge Street to the east City limit be maintained.

15. Staff propose the following amendments are to be made to the Rates of Speed By-law. That Rates of Speed By-Law 2002 -191, Schedule 'C' "Authorized Rates of Maximum Speed – 60 Kilometres per Hour" be amended by removing the following:

<u>Street</u>	<u>From</u>	<u>To</u>
"Mapleview Drive East	Bayview Drive	Huronia Road"
"Mapleview Drive East	CNR Tracks East of Yonge Street	East City Limit"
"Molson Park Drive	Mapleview Drive West	East City Limit"

16. That Rates of Speed By-Law 2002-191, Schedule 'C', "Authorized Rates of Maximum Speed – 60 Kilometres per Hour" be amended by adding the following:

<u>Street</u>	<u>From</u>	<u>To</u>
"Mapleview Drive East	Highway 400	East City Limit"

17. Barrie Police Service, Barrie Fire and Emergency Service and Municipal Law Enforcement staff do not oppose the recommendation.

#### **ENVIRONMENTAL AND CLIMATE CHANGE IMPACT MATTERS**

18. There are no environmental and climate change impacts related to the recommendation.

#### **ALTERNATIVES**

19. The following alternatives are available for consideration by General Committee:

**Alternative #1** General Committee could maintain the existing speed limit on Mapleview Drive East from Huronia Road to east of Yonge Street.

This alternative is not recommended as the existing posted limit produces a large variation of speeds causing operational and safety concerns through the corridor.

**Alternative #2** General Committee could lower the posted speed limit on Mapleview Drive East from east of Yonge Street to the East City Limit to a maximum posted speed limit of 50km/h.

This alternative is not recommended as research has shown a maximum speed limit that is set lower than an appropriate rate is likely to be ignored by the majority of motorists which would result in low compliance with the law, unsafe speeds and traffic flow which is not uniform.

**Alternative #3** General Committee could raise the posted speed limit on Mapleview Drive East from Bayview Drive to the East City Limit to a maximum posted speed limit of 70km/h.

This alternative is not recommended as it would set the maximum posted speed limit higher than what TAC Guidelines recommend with risk factors applied. This would create an unsafe driving situation as there would be a large variation of speeds as the posted speed limit would be above what is considered safe.

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**FINANCIAL**

20. The costs associated with the installation of new Maximum Speed signs are approximately \$2,000.00 and can be accommodated in the 2024 Operating Budget.

**LINKAGE TO 2022–2026 STRATEGIC PLAN**

21. The recommendation included in this Staff Report supports the following goal identified in the 2022-2026 Strategic Plan:
- Community Safety – Address speeding and aggressive driving to ensure street and pedestrian safety.
22. The recommendation of amending the Rates of Speed By-law to have a consistent maximum posted speed limit of 60km/h on Mapleview Drive East from Highway 400 to the East City Limit will help achieve safe, realistic and uniform speeds throughout the corridor. This will encourage compliance and decrease large variations in speed. This recommendation prioritizes Council's goal of creating safer streets.

APPENDIX "A"

Speed Limit Review – Mapleview Drive East



	Speed Limit Review		Design: MK	
	Mapleview Drive East		Ward: 9/10	
	60km/h Speed Limit	50km/h Speed Limit	Date: January 2024	