

Date: 2023-03-02

Subject: **40 km/h Speed Limit Neighbourhood Pilot – Citywide**

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Report Number: Public Works & Engineering-2023-244

Recommendations:

1. That the report titled: **40 km/h Speed Limit Neighbourhood Pilot – (244/2023 – File I.AC TRAF)**, to the Council meeting of April 5, 2023, be received; and,
2. That staff pilot neighbourhood 40 km/h speed limits within the designated pilot areas identified within this report; and,
3. That based on the results of speed studies conducted, that speeding concerns on local residential streets be addressed through the Peel Regional Police RoadWatch program; and,
4. Staff do not recommend implementing 30 km/h speed limits unless countermeasures are introduced that achieve these lower operating speeds; and
5. That Traffic By-law 93-93, as amended, be further amended to include the changes required to Schedule 10 (Rate of Speed) to support the speed limit changes within the pilot areas.

Overview:

- **Speed limits on City streets are set according to Ontario’s Highway Traffic Act. The default speed limit on roads within the City of Brampton is 50 km/h, unless otherwise posted.**
- **On May 30th, 2017, the Province of Ontario passed Bill 65, the Safer School Zone Act, which permits municipalities to enact neighbourhood speed limit reductions.**

- **Reducing speed limits alone have limited effect on vehicle operating speeds.**
- **Reduced speed limits should be applied in areas that either promote lower speeds through natural roadway characteristics or where countermeasures (traffic calming) have been implemented.**
- **Staff are recommending the implementation of neighbourhood 40 km/h speed limits in five (5) designated areas throughout the City to determine their effect on driver behaviour.**
- **The RoadWatch program is a co-operative effort by the municipalities within the Region of Peel and Peel Regional Police, giving residents the opportunity to report dangerous and aggressive drivers.**

Background:

On May 30th, 2017, the Province of Ontario passed Bill 65, the Safer School Zone Act, which permits municipalities to enact neighbourhood speed limit reductions. Currently, the default speed limit is 50 km/h, unless posted otherwise. Section 128 (2.1) of the Ontario Highway Traffic Act now allows municipalities to pass a by-law to set a speed limit less than 50 km/h for all roads within a designated area.

The statutory speed limit in the Province of Ontario is 50 km/h for cities, towns and villages, and 80 km/h elsewhere. The speed limit on all roadways within the City of Brampton is 50 km/h unless otherwise posted.

At the Special City Council Meeting of September 26, 2022 a motion (C304-2022) was carried as follows:

“That staff be requested to report on implementation, costs, and enforcement mechanisms with regard to reduction of speed limits on local residential roads, similar to other municipalities such as Mississauga among others.”

Current Situation:

The Traffic Operations group received over 2400 service requests from residents in 2021 and 2022. A majority of the service requests report concerns of aggressive driving and speeding on both local residential and neighbourhood residential streets, with requests for speed reductions and traffic calming. In response to this, staff conducted 447 speed studies on local residential and neighbourhood residential streets during the same time period. A full list of studies can be found in Appendix A.

Local Residential Streets

Of the aforementioned studies, 278 were conducted on local residential streets. Local residential streets serve local movement, are not intended for through vehicle traffic, and do not play a major role in the broader transportation network. Pedestrian and bicycle safety is priority on these streets and they should feel safe, comfortable, and be places where you get to know your neighbours. Examples of these types of streets are listed in Table 1.

Table 1: Speed Studies on Local Residential Streets with a 50 km/h Speed Limit

Local Roads – 50 km/h	Average Speed (km/h)	*85th Percentile Speed (km/h)
Zia Dodda Crescent (Ward 10)	37.21	46
Elmcrest Drive (Ward 4)	42.88	52
Barr Crescent (Ward 2)	37.65	44
Beachville Circle (Ward 5)	27.37	34
Glebe Cres (Ward 8)	33.33	43
Citywide Average (based on 195 speed studies)	37.08	45.44

*The speed at which 85% of vehicles are travelling at or below

Of the 195 studies on 50 km/h local roads, staff were not able to detect any instance where speeds would be considered in excess of what is expected. Although, there is evidence of sporadic speeding on all roadways.

The best way to address sporadic speeding concerns on local residential streets is through the Peel Regional Police RoadWatch program. The RoadWatch program is a co-operative effort by the municipalities within the Region of Peel and Peel Regional Police, giving residents the opportunity to report dangerous and aggressive drivers. Using this program to identify aggressive drivers raises awareness to both Peel Regional Police and the aggressive motorist.

Neighbourhood Residential Streets

In 2021 – 2022, staff conducted 169 speed studies on neighbourhood residential streets. These streets are collectors that are planned and designed to provide access to and from residential neighbourhoods, but are not intended for the use of non-local traffic. Examples of these types of streets are listed in Table 2.

Table 2: Speed Studies on Neighbourhood Residential Streets with a 50 km/h Speed Limit

Collector Roads – 50 km/h	Average Speed (km/h)	*85th Percentile Speed (km/h)
Don Minaker Dr south of Pasadena Ave (Ward 8)	44.8	53
Valleyway Dr west of Williams Pkwy (Ward 5)	42.5	50
Charolais Blvd east of Forrester Dr (Ward 4)	47.7	54
Queen Mary Dr north of Woodvalley Dr/Heathwood Dr (Ward 6)	47.6	57
MacKay St S btw Carisbrooke Crt and Wolverton Cres (Ward 7)	49.5	59
Citywide Average (based on 99 speed studies)	43.47	51.43

*The speed at which 85% of vehicles are travelling at or below

As expected, operating speeds are higher on neighbourhood residential streets as they are prone to non-local traffic and roadway characteristics generally promote higher speeds compared to local residential streets. Operating speeds on neighbourhood residential streets can vary depending on the roadway characteristics, design and the implementation of traffic calming. Although, of the 99 studies conducted, there were only a few roadways that significantly exceeded the citywide average. Most of these roadways already have plans in place to implement countermeasures.

Artificially Reduced Speed Limits

There have been multiple streets in the City that have been artificially reduced without an engineering or safe system approach; examples of these roads can be seen in Table 3, which have been reduced from 50 km/h to 40 km/h.

Table 3: Artificially Reduced Speed Limits

Examples of Roads	Average Speed (km/h)	*85 th Percentile Speed (km/h)
Lockwood Road (Ward 4)	43.22	53
Rosedale Avenue (Ward 1)	41.73	50
Church Street East (Ward 1)	45.62	55
Cornwall Road (Ward 3)	42.55	50
Eldomar Avenue (Ward 3)	44.07	52
Flowertown Avenue (Ward 4)	44.83	53
Harold Street (Ward 3)	44.76	52
Hilldale Crescent (Ward 7)	42.48	50

*The speed at which 85% of vehicles are travelling at or below

The data suggests that reducing the speed limit from 50 km/h to 40 km/h, without an engineering or safe system approach, does not promote lower speeds; will only increase non-compliance and demand more intervention from Peel Regional Police, as well as staff resources to respond to service requests.

Neighbourhood Speed Limits

Neighbouring municipalities, such as the City of Mississauga, the City of Toronto, Town of Oakville, Regional Municipality of York and others have established speed limit reductions on local residential roads, neighbourhood collector roads, or arterial roads that are designated Community Safety Zones.

Although public reports are currently not available, the general consensus seems to be that speed limit reductions that are not accompanied by countermeasures have a limited effect on operating speeds and merely result a higher percentage of non-compliance to the speed limit. This is consistent with what staff already know about artificially reduced speed limits.

Implementing the neighbourhood-wide speed reduction will also negate the need to post signs on every street, allowing for the following:

- Reduction of sign and pole pollution.
- Reduction of environmental impact.
- More cost effective and efficient.
- Allows for reallocation of labour and cost to other priorities.
- Easier to implement and enforce.
- Less maintenance.
- Reduced service requests.

Pilot Areas

For 40 km/h neighbourhood speed limits to be effective, the roadways chosen must already promote lower speeds through natural roadway characteristics or through the implementation of countermeasures. Again, selecting roadways that do not already promote these lower speeds merely leads to a higher percentage of non-compliance and potential for additional risk.

Based on the above, staff have proposed five (5) neighbourhoods for the 40 km/h neighbourhood speed limit pilot identified below. See Appendix B for location maps.

Royal Palm Drive Neighbourhood (Ward 2)

Royal Palm Drive is a residential street, with a width of 8.0 metres, with two accesses to Sandalwood Parkway, serving several local streets. Currently the entire area is at the statutory speed limit of 50 km/h. The narrow road, on-street parking and multiple curves on Royal Palm Drive promotes lower operating speeds, which have been confirmed through speed studies (see Table 4). With the above in mind, Royal Palm Drive in addition to the local streets it services would be appropriate for a reduce neighbourhood speed limit.

Table 4: Speed Studies for Royal Palm Drive (Ward 2)

Ward 2	Speed Limit (km/hr)	Average Speed (km/h)	*85th Percentile Speed (km/h)
Royal Palm Dr east of Rushmore Cres	50	37.67	46
Royal Palm Dr north of Rhine Crt	50	38.75	45

*The speed at which 85% of vehicles are travelling at or below

Southwest Quadrant - Downtown Brampton (Ward 3)

This neighbourhood is a good candidate for the speed reduction pilot, as multiple engineering and safety features are present in the area. The overall area naturally promotes lower speeds with narrow roads, on-street parking, mature trees and canopy overhead. See Table 5 for speed studies conducted within this pilot area.

Table 5: Speed Studies for Southwest Quadrant – Downtown Brampton (Ward 3)

Ward 3	Speed Limit (km/hr)	Average Speed (km/h)	*85 th Percentile Speed (km/h)
McMurphy Ave S south of Royce Ave	40	43.72	52
Harold St west of Fern St	50	44.76	52
Elliott St south of Craig St	40	42.05	50
Elizabeth St S south of Wellington St W	50	41.01	51
Elizabeth St S btw Craig St and Fraser Ave	50	43.6	52
Craig St east of Elliot St	40	28.52	36
Frederick St east of Barnstead Crt	50	43.03	51
Frederick St btw Mill St S and Elizabeth St S	50	40.45	48
Ladore Dr north of Elizabeth St S	40	36.55	46
Corby Cres west of Gordon Dr	50	36.41	45
Brenda Ave north of Kingsview Blvd	40	40.3	48

*The speed at which 85% of vehicles are travelling at or below

Elbern Markell Drive/Royal West Drive Neighbourhood (Ward 5)

Royal West Drive and Elbern Markell Drive are two of the first neighbourhood residential streets to be built with traffic calming incorporated in the design in the form of roundabouts and chicanes. Speed studies on both these roadways confirm that the characteristics promote speeds closer to 40 km/h (see Table 6 below). That being said, implementing a neighbourhood 40 km/h speed limit not only reflects a more appropriate speed limit for the local residential streets but also the neighbourhood residential streets, aside from Lorenvile Drive where countermeasure will need to be reintroduced.

Table 6: Speed Studies for Elbern Markell Dr. /Royal West Dr. Neighbourhood (Ward 5)

Ward 5	Speed Limit (km/hr)	Average Speed (km/h)	*85 th Percentile Speed (km/h)
Elbern Markell Dr north of Lorenvile Dr	40	43.07	50
Elbern Markell Dr north of Deseronto St	40	41.12	48
Lorenvile Dr east of Bear Run Rd	40	45.41	53
Lorenvile Dr at Lampman Cres	50	49.23	58
Bear Run Rd east of Elbern Markell Dr	50	37.02	45
Ingleborough Dr east of Elbern Markell Dr	40	43.55	52
Fallowfield Rd east of Fort Williams Dr	40	45.68	54

*The speed at which 85% of vehicles are travelling at or below

Westbrook Drive/Don Minaker Drive/Riverstone Drive Neighbourhood (Ward 8)

This area includes two (2) schools and a mix of 40km/h and 50/h speed limits. Two of the neighbourhood residential streets (Don Minaker Drive and Riverstone Drive) include traffic calming measures in the form of automated speed enforcement, Community Safety Zones and pavement markings (urban shoulders or parking lanes). Although some locations in Table 7 below promote speeds higher than what would be considered

acceptable, these can be mitigated by the reintroduction automated speed enforcement and/or other countermeasures.

Table 7: Speed Studies for Westbrook Drive/Don Minaker Drive/Riverstone Drive Neighbourhood (Ward 8)

<u>Ward 8</u>	<u>Speed Limit (km/hr)</u>	<u>Average Speed (km/h)</u>	<u>*85th Percentile Speed (km/h)</u>
Don Minaker Dr south of Riverstone Dr	50	44.36	51
Don Minaker Dr south of Pasadena Ave	50	47.73	54
Gallucci Cres near Claireville P.S.	40	40.07	52
Riverstone Dr west of Don Minaker Dr	40	39.71	48

*The speed at which 85% of vehicles are travelling at or below

Mount Royal Circle Neighbourhood (Ward 10)

Mount Royal Circle is a neighbourhood residential street with two (2) elementary schools and one park, with a posted speed limit of 40 km/h. It is currently a Community Safety Zone and monitored by automated speed enforcement. There is other planned traffic calming in the form of speed cushions on Leparc Road. Generally, the area promotes lower speeds due to the traffic calming in place and road design. Any significant non-compliance to the speed limit during the pilot can be address through front line mitigating measures.

Table 8: Speed Studies for Mount Royal Circle Neighbourhood

<u>Ward 8</u>	<u>Speed Limit (km/hr)</u>	<u>Average Speed (km/h)</u>	<u>*85th Percentile Speed (km/h)</u>
Mt Royal Cir north of Eiffel Blvd	40	42.94	51
Maisonneuve Blvd north of Sofitel Rd/Riva Ridge Dr	50	35.8	42
Leparc Road west of Camel Cres	50	37.55	45

*The speed at which 85% of vehicles are travelling at or below

Cost Analysis

The estimated cost to implement the required signage for this pilot, depicted in Figure 1, is outlined in Table 9. The signage is required to be installed at the access points to each neighbourhood.



Figure 1 – Neighbourhood Speed Limit Signage

Table 9: Cost Estimate Breakdown for the Proposed Pilot Locations

Pilot Location	Ward 5: Elbern Markell Dr/Royal West Dr	Ward 2: Royal Palm Drive	Ward 3: Downtown – Southwest Quadrant	Ward 8: Westbrook Dr/Don Minaker Dr/Riverstone Dr	Ward 10: Mount Royal Circle
Estimated Cost	\$4000	\$700.00	\$5000	\$1,400	\$1,400

30 km/h Speed Limits

Information obtained through the Transportation Association of Canada indicates that although speed is a contributing factor to motor vehicle collisions, variations in speeds between vehicles may be a more contributing factor. That being said, reducing speed limits further to 30 km/h, where roadway characteristic and/or traffic calming does not promote this lower speed, may lead to additional traffic safety concerns as the majority of motorists will continue to travel at a rate of speed they feel comfortable regardless of the lower speed limit. Staff do not recommend implementing 30 km/h speed limits unless countermeasures are introduced that achieve these lower operating speeds.

Next Steps

With the introduction of the 40 km/h neighbourhood speed limit pilot, staff will propose by-laws to be passed for each reduced neighbourhood. Signage will be installed at each neighbourhood road that intersects with the arterial road surrounding the neighbourhood. This will create an enforceable and uniform speed limit for each selected area.

In order to determine the effectiveness of this pilot, staff will conduct before and after studies to determine any change in driver behaviour as a result of the lower speed limits. Staff will also be able to measure the effectiveness of frontline mitigating measures at locations that require them to achieve compliance. Some of these mitigating measures may include speed display boards, in-road flexible traffic calming signs, regulatory/warning signs, pavement markings, enforcement and education. Staff will report back at a future Committee of Council meeting once enough data has been compiled to make a recommendation if the City should continue to implement neighbourhood speed limits.

Corporate Implications:

Financial Implications:

The costs associated with the installation of the traffic signs required to support this initiative are estimated to be approximately \$12,500. There are sufficient funds available to proceed with this initiative.

Communications Implications:

A comprehensive communications strategy will be developed in conjunction with Strategic Communications.

Term of Council Priorities:

This report incorporates the Vision Zero framework into transportation planning, design and operations to prevent fatal and serious injury from motor vehicle collisions within the City right-of-way.

Conclusion:

The safety and well-being of our citizens is a high priority. No loss of life is acceptable. Through adoption of the Vision Zero framework, the City of Brampton recognizes the need for the transportation system to be designed, maintained, and operated to be forgiving of human error.

With new techniques and different philosophies emerging (including Vision Zero), there is a requirement to update our guides to ensure staff have the most current tools at their disposal.

That being said, staff recommend implementing the neighbourhood 40 km/h speed limits in the areas selected to determine if they are an effective tool that can be added to the Neighbourhood Traffic Management Guide and contribute to the City's Vision Zero goal.

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Attachments:

- 1. Appendix A – 2021 – 2022 Speed Studies**
- 2. Appendix B – City of Brampton Pilot Project Locations & Signage**