

REPORT

COUNCIL MEETING

MEETING DATE: JANUARY 25, 2021

FROM: Engineering and Construction Department

DATE: January 12, 2021

SUBJECT: Neighborhood 40 km/h Speed Limit Pilot Studies

LOCATION: Multiple Locations

WARD: Multiple Wards: 2 and 4

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RECOMMENDATION:

1. That the report entitled "*Neighborhood 40 km/h Speed Limit Pilot Studies*" from the Engineering and Construction Department dated January 12, 2021, be received.
2. That the existing neighborhood 40 km/h zones in the West River and Heritage Way areas be retained and that complementary measures aimed at speed reduction be investigated in these areas.
3. That future consideration of neighborhood 40 km/h zones be limited to neighborhoods that have limited entry points and natural features that limit non-resident traffic, and that they be considered in conjunction with complimentary measures.

KEY FACTS:

The following are key points for consideration with respect to this report:

- There is increasing demand from residents for Town staff to address safety concerns related to speeding on Town roads.
- Neighborhood 40 km/h speed zone pilot studies were conducted in the West River and Heritage Way areas
- The results of the pilot studies indicate that the implementation of neighborhood 40 km/h speed zones signs did not achieve consistent operating speed reductions
- Other Ontario municipalities that have implemented neighborhood 40 km/h speed zones have reported similar conclusions.
- The implementation of inappropriate speed limits can have disbenefits such as non-compliance by drivers, driver frustration, and false security for vulnerable road users.

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- The future implementation of neighborhood 40 km/h zones should be considered in conjunction with complementary measures such as other engineering measures, enforcement and education.

BACKGROUND:

At the June 24, 2019 meeting of Council staff were directed to undertake a pilot study in the West River area to test the effectiveness of neighborhood 40 km/h zones.

At the October 22, 2019 meeting of Council, a report entitled "Neighborhood 40 km/h Speed Limit Pilot" was tabled. This report included an update on the West River pilot project as well as a recommendation to add the Heritage Way area as a second pilot area. The neighborhood 40 km/h zones make use of speed limit signs at the entry points to the neighborhood only, but all streets within the neighborhood are subject to the 40 km/h speed limit. This is different than a neighborhood that has a number of streets with 40 km/h speed limits which are each signed accordingly.

At the December 16, 2019 meeting of Council, staff were directed to work with Halton Regional Police Service and the West River Residents Association to develop a template for an integrated traffic safety management program to combine such measures as traffic calming, enforcement and public education. The results of the West River integrated traffic safety management program will be the subject of a future report to Council.

COMMENT/OPTIONS:

Study Method

The methodology for the Neighborhood 40 km/h Speed Limit Pilot studies conducted in the West River and Heritage Way areas was as follows:

- Conduct speed surveys on multiple road segments within the neighborhood prior to the installation of neighborhood 40 km/h speed limit signs
- Remove all 50 km/h speed limit signs and install neighborhood "40 km/h AREA speed limit" signs at the entry/exit points to/from the neighborhood. The signs located at neighborhood entrance points include a "BEGINS" tab, while those located at exit points include an "ENDS" tab.
- Following an acclimatization period, conduct speed surveys on the same road segments
- Compare the operating speeds from the "before" and "after" studies

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The following table summarizes the chronology of these studies:

Neighborhood	"Before" Study Dates	Sign Installation Date	"After" Study Dates
West River	September 25-27, 2019	October 25, 2019	October 28-30, 2020
Heritage Way	November 26-29, 2019	March 2, 2020	October 28-30, 2020

Shepherd Avenue, which is in close proximity to the West River study area, was closed between September 26, 2019 and December, 2019. The closure may have reduced the number of non-residents captured during the "Before" study as they used an alternate route during the Shepherd Avenue closure. This would not have had a significant impact on our study results.

Study Results

The detailed results of the pilot studies can be found in Appendices A and B. The following table summarizes the results of the pilot studies:

Neighborhood	Surveyed Road Segments	EB/NB* Average 85 th Percentile Speed (km/h)			WB/SB* Average 85 th Percentile Speed (km/h)		
		Before	After	Change	Before	After	Change
West River	14	49.1	49.9	+0.8	51.2	49.8	-1.4
Heritage Way	16	49.6	50.6	+1.1	48.3	51.0	+2.8

* EB – Eastbound, WB – Westbound, NB – Northbound, SB – Southbound

The results in the table above indicate that the implementation of the neighborhood 40 km/h signs did not result in a consistent reduction in operating speeds, and in some cases a marginal increase in operating speeds was recorded. A closer review of the results on the individual road segments confirms the lack of consistent results as the change in operating speeds ranged from an increase of 8.2 km/h to a decrease of 7.6 km/h.

Comparison with Other Municipalities

We reviewed the experience of six other Ontario municipalities (Ottawa, London, Hamilton, Kitchener, Sudbury, Mississauga) that have explored the use of neighborhood speed limit reductions as a means of operating speed reduction.

One consistent conclusion from these experiences is that a speed limit reduction in isolation is not an effective means of operating speed reduction. Instead, it is the physical characteristics and geometric design of a roadway that has the greatest impact on a driver's choice of speed.

Other municipalities have also cited some potential disbenefits of lowering speed limits including:

- Non-compliance by drivers, if not accompanied by proper education and enforcement
- Increased driver frustration which may lead to aggressive driving
- A false sense of security for vulnerable road users such as pedestrians and cyclists

Despite reaching these conclusions, there are municipalities (Hamilton, Mississauga) that have implemented neighborhood speed limit reductions and plan to expand the use of this technique. These recommendations are being made in the absence of quantitative data that shows that an operating speed reduction will be achieved as a result. This approach can instead be seen as a municipality confirming its goal of operating speed reduction and as a precursor to other more impactful changes such as traffic calming.

Analysis

The results of the West River and Heritage Way pilot studies indicate that the installation of neighborhood 40 km/h speed limit signs alone is not an effective means of consistent speed reduction. These results are consistent with follow-up studies conducted following the expansion of the use of 40 km/h zones in Oakville in 2016, as well as with the experience of other Ontario municipalities that have explored this technique.

The options related to the future use of neighborhood 40 km/h speed limit zones in Oakville are to discontinue their use, to modify the existing zones with additional signs or to retain the existing zones and expand the use of this technique to other neighborhoods.

Based on the results of the pilot studies, if the existing neighborhood 40 km/h speed zone signs were to be removed, we would not anticipate any significant changes to operating speeds in the West River and Heritage Way areas.

A second option would be to modify the current pilot areas by installing additional neighborhood 40 km/h speed zone signs. In our pilot areas, signs have been installed in the boulevard on the right side of the direction of travel. In some municipalities, signs have been installed in both the left and right boulevards. Our

pilot studies showed no correlation between the presence of signs and speed reduction on those road segments that have signs. We would anticipate that the installation of additional signs, at entry points or throughout the neighborhood, would not have a significant impact on operating speeds. The neighborhoods that were chosen for the pilot study have limited entry points as well as natural features that limit the amount of non-resident traffic. Therefore the majority of the vehicles captured by our “after” studies, which were done months after the sign installation, are driven by residents who have seen the signs repeatedly and are aware of the posted speed limit but who still do not consistently adhere to it.

The expanded use of neighborhood 40 km/h speed zones may not have a consistent positive impact on operating speeds on Town roads but it may serve as a precursor for other treatments such as traffic calming that could have a positive impact on operating speeds. The speed warrant thresholds in the Town’s traffic calming policy vary by posted speed limit. The lower the posted speed limit, the lower the speed warrant threshold. An expanded use of neighborhood 40 km/h speed zones would increase the number of streets that are eligible for traffic calming.

The expanded use of neighborhood 40 km/h speed zones would be most effective in neighborhoods where the vast majority of the traffic volume consists of residents of that neighborhood. This would include neighborhoods that have limited entry points and a natural feature that combine to make it an unattractive through route for non-resident traffic.

In the case of the West River and Heritage Way areas, we are recommending that complementary measures be investigated as additional means of achieving speed reduction. This includes other engineering measures such as traffic calming, enforcement of posted speed limits, as well as education for area residents. These measures are already being investigated as part of the West River integrated traffic safety management program which will be the subject of a future report to Council.

Other Traffic Speed Initiatives

Staff are currently working on other initiatives related to traffic speed including Automated Speed Enforcement (ASE) and a Resident Speed Survey Tool.

The Province of Ontario is planning to create an Administrative Monetary Penalties System (AMPS) which will cover ASE, automated school bus cameras, and red light cameras and is anticipated to come into effect by mid-2022. The implementation of AMPS will allow for the efficient processing of ASE charges in Oakville. Staff will engage in the required start-up activities in 2021 in order to be ready for ASE implementation in 2022. Staff will also continue to participate on the ASE Municipal

Steering Committee and the AMPS Working Group, chaired by the Ontario Traffic Council.

In late 2019, Council directed staff to report back on an online procedure for requesting and reviewing street speed surveys. Currently, residents and internal stakeholders must contact a staff person by phone or email to request either a new speed survey or to ask questions regarding the history of speed surveys at a particular location. The goal of the Resident Speed Survey Tool is to provide residents/ other stakeholders with an online means of being able to request a speed survey and track its progress, or to review historical data (dates of previous surveys, resulting 85th percentiles) . The implementation of this tool will improve access to this service for residents as well as reduce the demands on staff in Transportation Strategy who currently manage this process. Staff will be reporting back on implementation plans for this tool in early 2021.

CONSIDERATIONS:

(A) PUBLIC

Staff communicated with residents in both the West River and Heritage Way neighborhoods via hand-delivered notices, web updates and social media posts to update them on the status of the pilot project including the changes to the speed limits and the associated signage.

(B) FINANCIAL

There are no financial implications as a result of this report.

(C) IMPACT ON OTHER DEPARTMENTS & USERS

Staff from Corporate Communications as well as Roads and Works have provided support to this study.

(D) CORPORATE AND/OR DEPARTMENT STRATEGIC GOALS

This report addresses the corporate strategic goal to:
continuously review our programs and services.

(E) COMMUNITY SUSTAINABILITY

The safe operation of our roadways is an important facet to the social pillar of community sustainability.

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APPENDICES:

Appendix A - West River Speed Surveys
Appendix B - Heritage Way Speed Surveys

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