

Transportation Report to
SPC on Transportation and Transit
2020 September 30

ISC: UNRESTRICTED
TT2020-1036

Neighbourhood Speed Limit Review

EXECUTIVE SUMMARY

Calgarians want neighbourhoods and public spaces that are safe, accessible and inclusive for all residents, including children, seniors and people with disabilities. The City of Calgary is actively engaged in maintaining and enhancing the safety and liveability of neighbourhoods through the management of our transportation networks.

Collisions, particularly those involving injuries or fatalities, are a serious concern in Calgary. Recently, there have been an average of 9,100 collisions per year on streets inside Calgary neighbourhoods (with an average of 550 of them resulting in serious injury or death), representing 25 per cent of all collisions in Calgary. Many residents have also expressed feelings of fear or discomfort due to the speed of vehicles travelling along their street.

Based on previous Council direction, the Safer Mobility Plan 2019-2023 (and the embedded Vision Zero approach) aims to improve road safety for Calgarians, bringing us closer towards a transportation network free of fatalities and major injuries. A key step toward a Vision Zero approach is achieving operating speeds that reduce the likelihood of fatality or serious injury for all users by reducing impact energy.

In the long run, Administration recommends that The City move towards a 40 km/h speed limit on Collectors and a 30 km/h speed limit on Residential roadways.

Unfortunately, many of the roads in neighbourhoods do not currently provide an environment where these speed limits would be credible to most drivers. It is not feasible to revise the environment on all City roadways in a short period of time. Without that supporting environment, Administration expects that compliance with these recommended limits would be low. As a result, Administration has prepared a strategy to support incremental change that will lead towards the desired long-term state of safer neighbourhoods while considering the reality of the road network and environments that have been built to date in Calgary.

After careful review (as outlined in this report and its attachments), Administration has concluded that changing the unposted speed limit to 40 km/h while posting (for the time being) most Collector roadways at 50 km/h represents an important first step towards reducing the frequency and severity of collisions and enhancing the liveability of our neighbourhoods. Under the City Charter, Council can make this change through bylaw.

In order to continue to make progress towards the desired long-term state, Administration will work with industry partners to revise road standards to ensure that the construction of future roadways and retrofits of existing roadways (including through our existing traffic calming program) result in environments where the recommended long-term speed limits would be credible to most drivers. Administration will then apply its existing authority to post (or rely on unposted limits, as appropriate) these roadways to speed limits in alignment with their new environment and our long-term vision for safe and comfortable roadways in neighbourhoods.

Neighbourhood Speed Limit Review

ADMINISTRATION RECOMMENDATION:

That the Standing Policy Committee on Transportation and Transit recommends that Council hold a Public Hearing; and

1. Give three readings to the proposed City of Calgary Standard Speed Limit Bylaw to change the unposted speed limit from 50 km/h to 40 km/h within the city limits.
2. Direct Administration to post 50 km/h speed limit signs on existing Collector roadways unless or until a credible environment for a slower speed limit is provided.
3. Direct Administration to work with industry partners to revise Collector standards to support 40 km/h roadways and to revise Residential standards to support 30 km/h roadways, and to apply those standards in new communities and for retrofit projects on existing city roadways.

PREVIOUS COUNCIL DIRECTION / POLICY

Neighbourhood speed limits and vehicle operating speeds have been explored several times in Calgary. Attachment 1 of this report summarizes these efforts going back to 1980.

At the 2018 September 24 Meeting of Council, Council approved the Notice of Motion on Street Safety and Neighbourhood Speed Limits (C2018-0960) directing Administration to provide a recommendation on whether the reduced speed limit should be 30 km/h and/or 40 km/h, as well as to what extent Collector classification streets should receive reduced speed limits, as part of an interim report as well as an engagement plan through the Standing Policy Committee on Transportation and Transit no later than Q2 2019.

At the 2019 October 23 meeting of SPC on Transportation and Transit, the committee reviewed TT2019-1300 Street Safety and Neighbourhood Speed Limits Update. After review of the report committee forwarded the following amended recommendations:

1. To engage with Calgarians and business stakeholders on the subject of reducing or maintaining neighbourhood speed limits and report the findings and a recommendation to Council through the SPC on Transportation and Transit no later than June 2020.
2. To further develop the Neighbourhood Speed Limits business case to include all costs related to the program, including but not limited to cost of engagement, cost of City operations due to collisions, cost of temporary vs. permanent measures for each scenario.

In the 2019 November 29 Budget adjustment deliberations, Council approved:

RECONSIDER its decision made November 18, 2019 regarding Street Safety and Neighbourhood Speed Limits Update, TT2019-1300, in order for the \$200,000 in one time funds committed to engage Calgarians on the subject of reducing or maintaining neighbourhood speed limits instead be re-allocated as one-time bridge funding for the Downtown Outreach Addictions Partnership (DOAP team) serving to reduce the impact of substance abuse issues and public intoxication.

BACKGROUND

Traffic collisions can cause life-altering consequences for everyone involved. Each year an average of 36,600 motor vehicle collisions occur on Calgary streets. About a quarter – an

Neighbourhood Speed Limit Review

average of 9,100 – of these collisions occur in neighbourhoods, where there are more people walking and wheeling, many of whom are children and seniors.

Of those 9,100 collisions, more than 500 each year result in a serious injury or death. More than half of these serious injuries are experienced by drivers and passengers inside vehicles. Streets in neighbourhoods serve as meeting places, as places to play and exercise, and as connectors to the local amenities that enhance liveability for all Calgarians. Our residents report that the fear of collisions impacts their choices to get out for a bike ride or to allow their children to walk to school.

The City of Calgary has several programs that work to enhance safety on our transportation network. Corridor studies, major intersection rehabilitation, spot improvements and new pathways and interchanges all serve to target high collision locations with capital investments to reduce the risk on our roadways. For collisions occurring in neighbourhoods, these spot treatment approaches are not efficient, as the risks are broadly distributed. At the direction of Council, this report investigates the potential impact of reducing speed limits in neighbourhoods to reduce the harm experienced by our residents.

As shown in the Technical Analysis Report (Attachment 2), a sampling of speed data on objectively selected roadways (not collected on a complaint basis) suggests that most people drive near or below the current speed limits when driving in neighbourhoods.

Unfortunately, the current speed limit leaves little margin for error. A number of studies have demonstrated that driving at 50 km/h in neighbourhoods is risky for everyone on the road. Small reductions in driving speed can reduce the chance of collisions. Travelling at a slower speed gives the driver more time to react, broadens their field of vision, and reduces how severe crashes are when they happen; it also gives others, including cyclist and pedestrians, more time to react to the approaching vehicle. (See Attachment 2 for details.)

Other cities across Canada, North America, and globally, have found that reducing driving speeds in neighbourhoods has reduced the frequency and severity of collisions. (See Attachment 2 for details.)

Collisions have a significant financial cost to Calgary. The impact to society of our current collision patterns is estimated at over one billion dollars per year. This includes costs faced by all Calgarians through provincial taxes (medical treatment and rehabilitation), costs faced by businesses through lost efficiency and benefit programs, and costs to The City for collision response and clean-up. (See Attachment 2 for details.)

The City reviewed the options available under the new City Charter to reduce the unposted speed limit in Calgary through a bylaw.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

There are two primary types of roadways within Neighbourhoods. Residential streets are typical streets that provide access to homes. Collector streets provide access to some homes, but also serve a circulation function within the area, support transit service, provide access for school sites, local shops and parks, and connect to the larger network of roadways that run between communities.

Administration investigated six potential scenarios in response to Council requests and discussion. Each scenario represents a selection of an unposted speed limit which would apply

Neighbourhood Speed Limit Review

to Residential class roadways, and options for setting the speed limit (either posted or unposted) on Collector class roadways in the neighbourhood setting.

Attachment 2 of this report provides the data, analysis, and outcomes of this investigation, including cost-benefit analysis for each scenario. The recommendations presented in this report arise from the following key considerations:

Credibility

Research has shown that drivers will generally comply with posted speed limits when those limits match with the level of comfort provided by the road environment. In Calgary, the typical environment on Residential class roadways (short segments with narrower travel lanes and on-street parking) means that limits of 40 km/h are generally credible, with 30 km/h appropriate in some places. Compliance with the 30 km/h speed limit in playground zones is relatively high but we know that as zones get longer compliance decreases. So, although Calgarians who are driving respect the space near parks and schools, the credibility of 30 km/h on longer stretches of collector or residential roads as they are currently built is generally low.

Unfortunately, many of the larger roads in neighbourhoods (classified as Collectors by The City) do not currently provide an environment where a 40 km/h speed limit would be credible to most drivers. As a result, physical changes to the roadway would be necessary for most drivers to comply with a slower limit on these roadways.

Cost

The cost of each scenario was investigated. The capital costs for retrofitting the entire Collector network to make 30 km/h or 40 km/h credible are significant. Although the cost-benefit ratios of scenarios that include significant traffic calming are favourable, it is not feasible to deliver such a significant change to all Collectors in a short time-frame. As a result, Administration reviewed options to take an incremental approach where speed limits on specific roadways are reduced to align with these long-term goals as the appropriate environment can be established.

Administration also investigated the impact of each scenario without traffic calming in order to identify a high value approach for short term action that would support achieving the desired long-term state over time.

Costs to residents and city operations were also considered. Travel time analysis confirms findings from other jurisdictions that these changes have little impact on a typical driving trip. Impacts to Calgary Transit and other city operations vary by scenario and are discussed in more detail in Attachment 2. The recommended approach has minimal impact to city operations, citizens and businesses in the short-term while being an important move toward safer mobility.

Alignment with the City of Edmonton

The City of Edmonton is currently moving forward on a similar project to reduce their unposted speed limit. At their Council's direction, Edmonton is preparing a bylaw and implementation plan to deliver a 40 km/h unposted limit. For The City of Calgary, bylaw consistency with Edmonton is expected to improve compliance in both cities due to the number of people who routinely, or occasionally, travel between our two jurisdictions.

Participation in Review by the Calgary Police Service

**Transportation Report to
SPC on Transportation and Transit
2020 September 30**

**ISC: UNRESTRICTED
TT2020-1036**

Neighbourhood Speed Limit Review

The Calgary Police Service was engaged as a key stakeholder and contributed information and guidance at the project team and advisory level. Credibility was a significant concern for CPS, as enforcement of speed limits that do not match the environment drivers experience is expected to be challenging.

Results

In the long term, considering the layout of existing communities and other factors, an approach that achieves 30 km/h on Residential roadways and 40 km/h on Collector roadways is expected to provide a high value for residents, assuming roadway environments are credible for those speed limits.

In order to realize this desired state, Administration recommends updating The City's design standards for Residential and Collector roadways in order to ensure that future roadways are constructed to create this environment, and any retrofit projects undertaken on existing roadways bring those roads into alignment with this goal.

For most existing neighbourhood roadways in Calgary, these speed limits would not be credible. The City of Calgary does not currently have the capacity to retrofit all roadways to create a credible environment.

As a result, Administration recommends setting the unposted limit to 40 km/h (aligning with the current environment on most Residential Streets) and posting most Collector roadways (for the time being) at 50 km/h. On its own, this action is expected to reduce the number of collisions in neighbourhoods by about 300 per year. It is low cost (~\$2.3M), is consistent with the legal approach being taken by the City of Edmonton, and is expected to have relatively high compliance.

Over time, and in combination with other safety projects, these changes will move the City closer to our goal of eliminating deaths and serious injuries in our Transportation network.

Stakeholder Engagement, Research and Communication

At Council's direction, Administration did not conduct engagement with the public on the specific recommendation presented in this report. Previous engagement activities supporting the pedestrian strategy, local growth initiatives, ward safety meetings, and Council feedback on their own citizen engagement indicate that driving speeds (even though they are generally in compliance with posted limits) remain a significant concern for many Calgarians.

Administration has maintained a project website with information on project goals and progress for the public, including a link to an external resource that estimates travel time impacts associated with different speed limit scenarios: ETAtool.com

The Calgary Police Service (CPS) was consulted as a key stakeholder in traffic safety in the City of Calgary and provided a written statement summarizing their key concerns, as shown in Attachment 5.

The project team has continued to monitor results of similar efforts in other jurisdictions. The latest information is included in Attachment 2 of this report.

Neighbourhood Speed Limit Review

Strategic Alignment

Improving the safety of neighbourhood streets in Calgary directly supports the Calgary Transportation Plan (CTP) and its associated policy (TP011). Goal #2 of the CTP is “promote safety for all transportation system users.” Additionally, Council Directive M1 from the One Calgary service plan and budget identifies safety as a primary priority for transportation.

Social, Environmental, Economic (External)

Social: Reduced speed limits in neighbourhoods leads to fewer collisions, injuries and fatalities, contributing significant social benefit to the community. Additional social benefits include reduced traffic noise and a greater sense of safety and comfort for people walking, wheeling and playing outdoors in their neighbourhoods.

Environmental: Reduced speed limits in neighbourhoods are expected to have negligible environmental impact in terms of emissions and energy use. A reduction in noise pollution in neighbourhoods is expected.

Economic: Collisions cost Calgarians over 1 billion dollars annually, including 274 million dollars annually on neighbourhood roadways. They represent a significant efficiency loss to the local economy and reducing collisions will provide considerable economic benefit.

Financial Capacity

Current and Future Operating Budget:

Operating costs for the current budget cycle: Education and awareness efforts to support the implementation of the recommended approach will be conducted through existing communication channels (e.g. City social media accounts, variable message signage, media relations team). Based on the recommended approach, minimal operational impacts are expected for City business units.

Current and Future Capital Budget:

Capital costs for the current budget cycle: \$2.3M (see Attachment 3) for signage. Funding would be sourced from existing capital budgets.

Risk Assessment

Risks associated with pursuing the recommended option:

- If legislative changes are not supported with appropriate education, enforcement, and design, credibility of speed limits can be undermined.
- Results of recommended approach will be gradual. Risk that public or political support for the measure will depend on unrealistic timelines or rate of improvement.
- Recommended option does not align with international best practice on speed limits for Vision Zero results (30km/h preferred). Risk that pace of change may not be sufficient to ensure support from communities and advocates.

Risks associated with not pursuing the recommended option:

Transportation Report to
SPC on Transportation and Transit
2020 September 30

ISC: UNRESTRICTED
TT2020-1036

Neighbourhood Speed Limit Review

- Current collision rates in Calgary are gradually decreasing due to ongoing efforts to improve safety, but not at a rate that aligns with the targets established in the Safer Mobility Plan for the medium- or long-term. Failure to take action risks continuing that trend.
- Other approaches to reducing the frequency and severity of collisions (e.g. reconstructing major intersections, prohibiting heavy personal vehicles, no right turn on red regulations) have higher capital, operating, or political costs.

REASON(S) FOR RECOMMENDATION(S):

Of the available options, the recommendations represent the most effective means available at this time given budgets and current road designs to achieving the goal of reducing the number and severity of collisions in neighbourhood areas. The proposed bylaw aligns with City of Edmonton and is anticipated to have relatively high compliance.

ATTACHMENT(S)

1. Attachment 1 – Summary of Previous Council Direction, Policy, and Neighbourhood Speed Limit Changes
2. Attachment 2 – Technical Analysis for Neighbourhood Speed Limit Review
3. Attachment 3 – Implementation Plan for Recommended Option
4. Attachment 4 – Draft Bylaw
5. Attachment 5 – Correspondence from The Calgary Police Service