

Residential Speed Limit Review – Background Information and Feedback Summary

ISSUE

Building on the revising speed limits on residential streets project roadmap that was provided in March of 2021, this report provides information collected from technical collision analysis, literature review, jurisdictional scan and surveys of the public.

BACKGROUND

Since 2013, the Administration has been working closely with local residents, community associations, and area Councillors to complete 75 Neighbourhood Traffic Reviews (NTRs), with another 10 currently underway. The most common concern raised by residents is vehicles speeding on neighbourhood streets.

At its Regular Business Meeting held on October 22, 2018, City Council considered the Posted Speed Limit Review report, and resolved:

- “1. That the Administration develop a detailed framework for revising posted speed limits on neighbourhood streets;
2. That the Administration develop a detailed framework for revising posted speed limits in school and playground zones; and
3. That the Administration report on options for addressing speeding and safety in areas of high concentration of seniors.”

At its meeting held on March 1, 2021, the Standing Policy Committee on Transportation received an information report for the Residential Speed Limit Review – Project Roadmap.

CURRENT STATUS

Posted speed limits are governed by Bylaw No. 7200, The Traffic Bylaw, which states that the posted speed limit is 50 km/h, with exceptions being specifically listed within Schedule 4. The speed limit is 50 km/h for most residential areas. The Montgomery Place neighbourhood posted speed limit is 40 km/h since there are no curbs or sidewalks.

Council Policy C07-015, Reduced Speed Zones for Schools guides the City’s current practice for the creation of school zones. Highlights of the policy include:

- A posted speed limit of 30 km/h is installed at all elementary and high schools,
- In effect from 8:00 a.m. to 5:00 p.m., Monday to Friday from September 1 to June 30, and
- End of school zone is marked with a sign indicating maximum speed.

Saskatoon has not established reduced speed limits for playgrounds, areas with a high concentration of seniors, or streets designated as neighbourhood bikeways.

Approximately 650 speed studies or assessments have occurred in direct response to resident concerns with vehicle speeds on residential streets in neighbourhoods since 2013.

The Administration uses the 85th percentile vehicle operating speed to validate whether a speeding issue exists. If the speed at which 85% of drivers are operating is greater than the posted speed limit plus 10% (i.e. 55 km/h on a residential street), then the street is eligible for traffic calming. In approximately half of the studies undertaken, the street was not eligible for traffic calming measures.

This could indicate that residents are concerned with drivers travelling at excessive speeds, and additionally there may be a perception of speeding because the vehicle operating speeds 'feel' too fast for residents.

In 2019, the Saskatoon Police Service Traffic Unit issued over 12,870 speeding tickets.

Between 2015 and 2019, there were a total of 38,049 motor vehicle collisions on city streets, including 27 fatalities and 217 people severely injured with a summary as follows:

- The average number of fatalities on city streets is 5.4 per year, with the highest year being 2017, with 10 fatalities.
- The average number of people severely injured on city streets is 43.4 per year, with the highest years being in 2015 and 2016, each with 50 people severely injured.
- On average, there are 20.8 collisions per day in Saskatoon; the highest collision days are dominated by property damage only type collisions.

A background information report including the collision history details is provided in Appendix 1.

DISCUSSION/ANALYSIS

The background information report in Appendix 1 also includes a literature and best practices review, and a jurisdictional scan. Key findings include:

- **Establishing Speed Limits:** There is a holistic approach being used by some municipalities to establish posted speed limits. The Safe Systems approach is proactive and aims to minimize severe consequences of motor vehicle collisions so that road users involved in a collision do not suffer a severe injury or fatality as a result. The City of Saskatoon follows the traditional approach to setting speed limits which relies on the roadway geometric design standards, roadway classification, and adjacent land use to determine the appropriate speed limit.
- **School and Playground Areas and Zones:** Saskatoon's current approach to install school zones at all elementary and high schools and no playground zones differs from the national guidelines established by the Transportation Association of Canada (TAC) in the School and Playground Areas and Zones: Guidelines for Application and Implementation (Guidelines). The Guidelines were published

after the City implemented school zones and offer guidance on the type of area or zone for a school or playground site dependent on the risk factors involved for that site.

- **Areas with a High Concentration of Seniors:** There is no national guide on implementing reduced speed areas or zones for streets with a higher concentration of seniors.
- **Neighbourhood Bikeways:** According to TAC's Geometric Design Guide for Canadian Roads, unseparated bikeways provide suitable conditions for bicyclists where motor vehicle speeds are 30 km/h or less and where motor vehicle volumes are less than 2,500 vehicles per day.
- **Jurisdictional Scan:** Specifics according to a review of 16 Canadian municipalities include:
 - Speed limit reductions for residential areas:
 - Six have recently approved a speed limit reduction (either 40 km/h or 30 km/h)
 - Four have a posted speed limit of 40 km/h
 - Three are considering a speed limit reduction (one 30 km/h, one 40 km/h, one both)
 - Three have posted speed limit of 50 km/h and are not considering a speed limit reduction
 - School zones:
 - Eleven have a speed limit of 30 km/h
 - Two use either 30 km/h or 40 km/h speed limits (dependent on speed limit for regular hours)
 - Two use playground zones of 30 km/h for their schools
 - One has a speed limit of 40 km/h
 - Playground zones:
 - Ten have a speed limit of 30 km/h
 - Four do not use
 - Two use either 30 km/h or 40 km/h speed limits for (dependent on speed limit for regular hours)
 - There was a wide range of effective hours used for school and playground zones.
 - One municipality has established reduced speed limits for areas with a high concentration with seniors. The speed limit is reduced by 20 km/h for the street through the section of street with a high concentration of seniors.
 - Four municipalities have established reduced speed limits of 30 km/h for designated bikeways or are undertaking a pilot project for these types of facilities.

Engagement Summary

Two surveys were completed to obtain opinions on revising speed limits in residential areas of Saskatoon: 1) a representative survey was completed; and 2) an open public survey was available online. Key findings of the surveys were:

- Open public survey respondents are less in favour of speed limit reductions compared to statistically relevant survey respondents (34% for public survey and 52% for representative survey).
- Majority of representative survey respondents (60%) and about a third of open public survey respondents (31%) are concerned about the speed of the vehicles in their neighbourhoods.
- Respondents of both surveys prefer 30 km/h or 40 km/h speed limits more for local streets (52% for public survey and 34% for representative survey) compared to collector streets (15% for public survey and 36% for representative survey) or arterial streets (5% for public survey and 25% for representative survey), though no change in speed limits on any streets is the most preferred.
- Majority in both groups agree on the removal of the speed limits next to high schools (77% for public survey and 53% for representative survey) and adding speed limits next to playgrounds (57% for public survey and 78% for representative survey).
- Respondents of both surveys prefer to keep the times and days that school and playground zones are in effect (80% for public survey and 68% for representative survey).

The Speed Limit Review Survey 2021 including details on the purpose, methodology, interpreting the report, and detailed findings is found in Appendix 2.

A report providing additional information on the public engagement conducted for the Residential Speed Limit Review is included in Appendix 3.

Several stakeholder meetings have occurred to date:

1. Internal on January 19, 2021 – representatives from Saskatoon Transit, Sustainability, Water and Waste Operations, Planning and Development, Community Standards, Saskatoon Fire Department, Parks, and Transportation.
2. Internal on January 19, 2021 – representatives from Solicitor's Office, Saskatoon Police Service, and Transportation.
3. External on March 25, 2021 – representatives from Medavie Health Services West, Saskatchewan Health Authority, Saskatoon Council on Aging, Greater Saskatoon Catholic Schools, and Saskatoon Public Schools. Regrets received from Saskatoon Safety Council Representative, and Saskatchewan Government Insurance.

The Saskatoon Council on Aging submitted a letter in April, included as Appendix 4.

FINANCIAL IMPLICATIONS

The financial implications of the implementation of any speed limit revisions from this review will be identified and presented as part of future reports and incorporated into Transportation's capital budget submission for consideration within the 2022-2023 multi-year business plan and budget deliberations.

OTHER IMPLICATIONS

There are no privacy, legal, social, or environmental implications identified with this report; however, the remaining reporting and possible implementation steps will have implications that will be identified within future reports.

NEXT STEPS

1. Prepare a decision report to be presented at the Standing Policy Committee on Transportation meeting on August 9, 2021, summarizing the various options and their implications for speed limits for residential streets and whether street eligibility will be based on road classification or street function.
2. Prepare approval (or decision) reports, if and as required, to address speed limits for schools, playgrounds, areas with a high concentration of seniors, and streets designated as neighbourhood bikeways.
3. Develop an implementation strategy.

The planned project schedule is included as Appendix 5.

APPENDICES

1. Background Information
2. Speed Limit Review Survey 2021
3. Speed Limit Review – Engagement Supplemental Information
4. Saskatoon Council on Aging Letter
5. Anticipated Residential Speed Limit Review Project Schedule

Report Approval

Written by: Mariniel Flores, Transportation Engineer, Transportation
Nathalie Baudais, Senior Transportation Engineer, Transportation

Reviewed by: David LeBoutillier, Engineering Manager, Transportation
Jay Magus, Director of Transportation

Approved by: Terry Schmidt, General Manager, Transportation and Construction

RESIDENTIAL SPEED LIMIT REVIEW

Background Information

- Official Community Plan
- Transportation Master Plan
- Speed Limit Review



AUTHORIZATION

PREPARED BY:



Mariniel Flores, P.Eng.
Transportation Engineer



Nathalie Baudais, P.Eng.
Senior Transportation Engineer

Checked By:



David LeBoutillier, P.Eng.
Engineering Manager, Transportation

CONTENTS

1. Introduction	5
2. Existing Speed Limits	8
2.1. Streets with Residences	8
2.2. School Areas and Zones	8
2.3. Playground Areas and Zones	9
2.4. Areas of High Concentration of Seniors	9
2.5. Neighbourhood Bikeways	9
3. Speed Data	10
4. Collision Data	12
4.1. Collision History - City-Wide	12
4.2. Collision History - By Street Classification	14
4.3. Collision History - Streets with Residential Land Uses	15
4.4. Saskatchewan Health Authority Collision Data	20
5. Literature Review	21
5.1. Relationship between Speed and Traffic Safety	21
5.1.1. Stopping Distance	21
5.1.2. Visual Field	22
5.1.3. Road User Risk	23
5.2. Establishing Speed limits	25
5.2.1. Road Risk Method	25
5.2.2. Safe System Approach	26
5.3. School and Playground Areas and Zones	26
5.4. Areas with a High Concentration of Seniors	28
5.5. Neighbourhood Bikeways	28
6. Jurisdictional Review	30
7. Effectiveness of Speed Limit Reductions	35
7.1. Street Design	35
7.2. Montgomery Neighbourhood	35
7.3. Other Jurisdictions	36
7.3.1. Calgary	36
7.3.2. Edmonton	36
7.3.3. Okotoks	37
7.3.4. Portland	37
7.3.5. Seattle	37
7.3.6. Toronto	37
8. References	38

LIST OF FIGURES

Figure 1: Map of Collector Streets in Saskatoon	6
Figure 2: Map of Arterial Streets in Saskatoon.....	7
Figure 3: Locations of Speed Studies Completed (2014-2020)	11
Figure 4: Vehicle Fatal Collisions in Saskatoon (2015 to 2019)	13
Figure 5: Vehicle Severe Injury Collisions in Saskatoon (2015 to 2019)	13
Figure 6: Vehicle Collisions in Saskatoon by Street Classification (2015 to 2019)	14
Figure 7: Vehicle Fatal Collisions in Saskatoon by Street Classification (2015 to 2019).....	14
Figure 8: Vehicle Severe Injury Collisions in Saskatoon by Street Classification (2015 to 2019).....	15
Figure 9: Total Vehicle Collisions for Streets with Residences in Saskatoon (2015 to 2019).....	16
Figure 10: Vehicle Fatal Collisions for Streets with Residences in Saskatoon (2015 to 2019).....	16
Figure 11: Vehicle Severe Injury Collisions for Streets with Residences in Saskatoon (2015 to 2019)	17
Figure 12: Map of Total Collisions for Streets with Residential Land Uses (2015-2019).....	18
Figure 13: Map of Fatal or Severe Injury Collisions for Streets with Residential Land Uses (2015- 2019)	19
Figure 14: Driver Reaction Time and Stopping Sight Distance.....	21
Figure 15: Dynamic Viewsheds and Speed (Source: U.S. Bureau of Land Management, 2008).....	22
Figure 16: Field of Vision by Speed	22
Figure 17: Vulnerable Road User Survival Rate (Vulnerable road user risk of severe injury or death vs mean speed)	23
Figure 18: Likelihood of Pedestrian/Cyclist Death.....	23
Figure 19: Probability of Death or Serious Injury (Source: Jurewicz et. al., 2016)	24
Figure 20. Average risk of severe injury (left) and death (right) for pedestrians age 30 vs. 70	28

LIST OF TABLES

Table 1: 85 th Percentile Operating Speed Data Summary during Regular Hours (2014-2020)	10
Table 2: 85 th Percentile Operating Speed Data Summary during School Hours (2014-2020).....	10
Table 3: Total Vehicle Collisions in Saskatoon (2015 to 2019).....	12
Table 4: Stopping Sight Distance.....	21
Table 5: Montgomery Place Operating Speeds Before and After Speed Limit Reduction	36

1. INTRODUCTION

Since 2013, the Administration has been working closely with residents, community associations, and Councillors to complete 75 Neighbourhood Traffic Reviews (NTRs). The most common concern raised by residents is speeding on neighbourhood streets, followed by concerns for pedestrian safety.

This report presents the findings and recommendations of the technical review for revising speed limits on residential streets, in school and playground zones, in areas with a high concentration of seniors, and on streets designated as a neighbourhood bikeway.

This review considers the appropriate speed limit for streets with residential land uses, including the following street classifications:

- **Local streets** make up most of streets in residential neighbourhoods. They usually have lower volumes of traffic and their main function is for access to residences.
- **Collector streets** have higher volumes of traffic and provide access to schools, parks, and community centres, and often have bus routes. Some examples include Richardson Road, Assiniboine Drive, Kingsmere Boulevard, and Stensrud Road. Figure 1 shows a map of the collector streets in the city.
- **Arterial Streets** are typically around the boundary of a neighbourhood and connect to other neighbourhoods, have higher volumes of traffic, and sometimes have more than one travel lane in each direction. Some examples include segments of Diefenbaker Drive, Spadina Crescent, and Taylor Street. Figure 2 shows a map of the arterial streets in Saskatoon.

Figure 1: Map of Collector Streets in Saskatoon

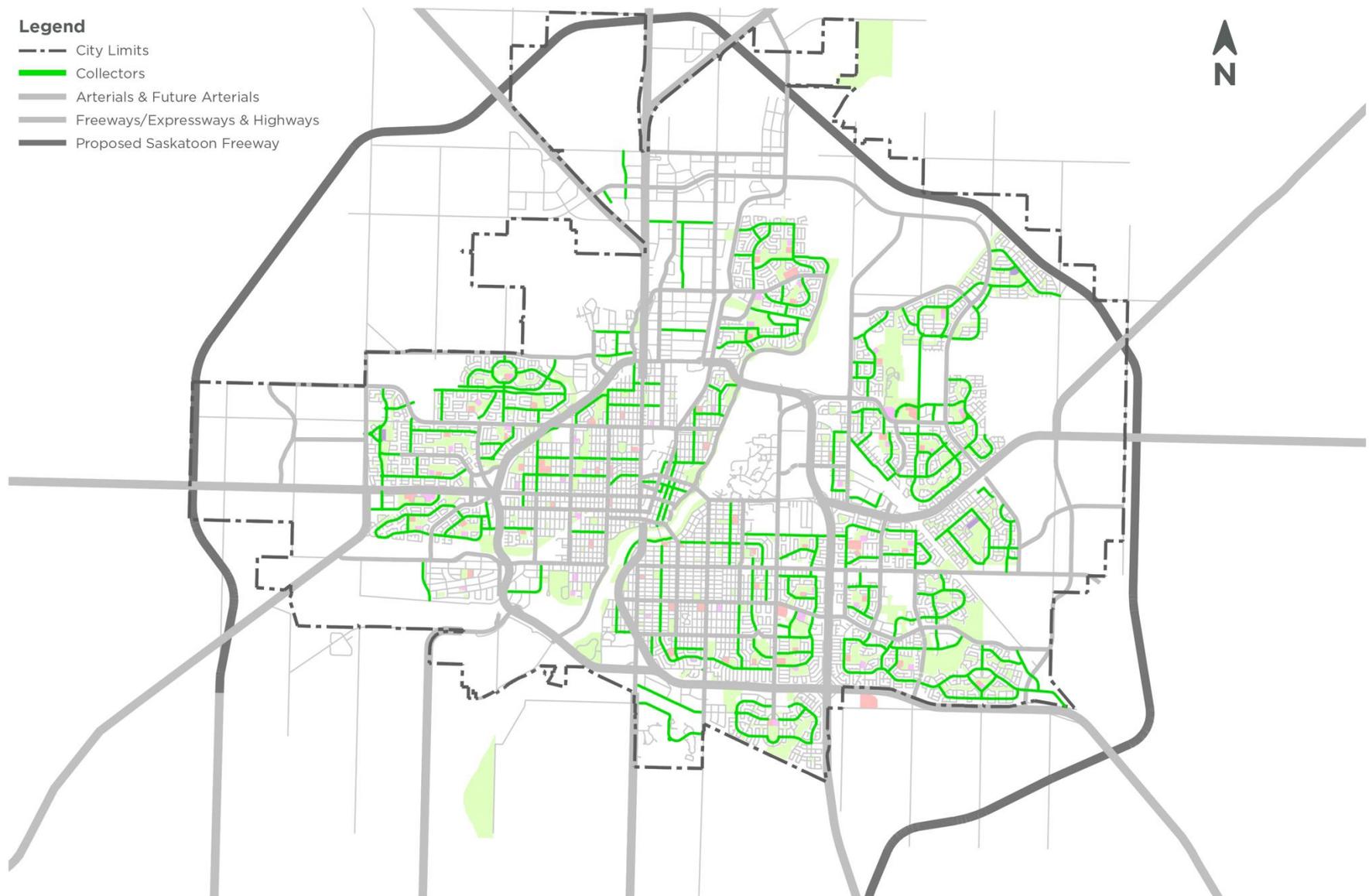
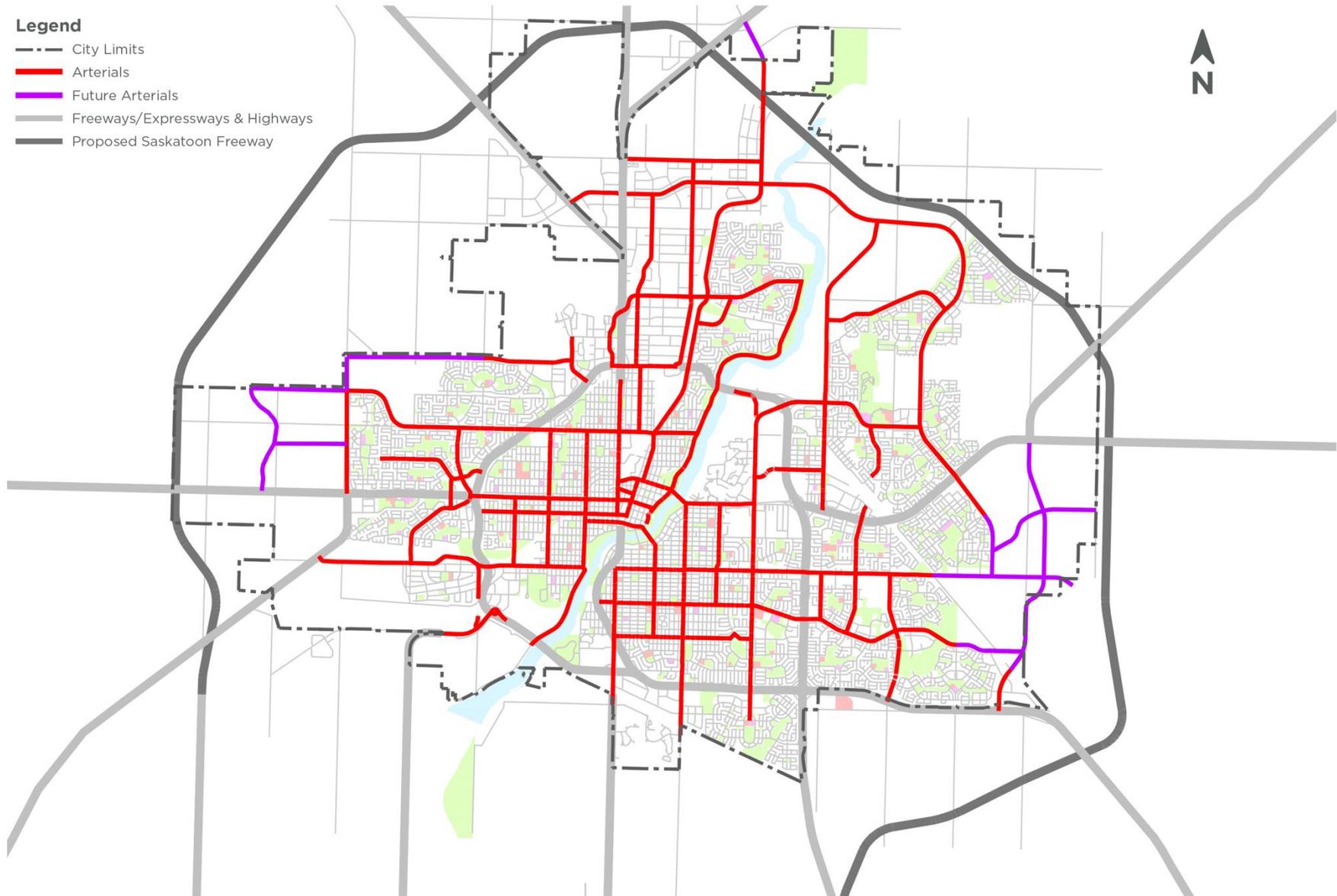


Figure 2: Map of Arterial Streets in Saskatoon



2. EXISTING SPEED LIMITS

2.1. STREETS WITH RESIDENCES

The speed limits are currently governed by Bylaw No. 7200, The Traffic Bylaw, which states that the speed limit is 50 km/h, with exceptions specifically listed in Schedule 4 of the bylaw.

The speed limit for the majority of streets in residential areas is 50 km/h with the exception of the Montgomery Place neighbourhood which has a posted speed limit of 40 km/h since there are no curbs or sidewalks.

2.2. SCHOOL AREAS AND ZONES

The City does not currently use school areas (i.e. school signs only with no associated speed limit reduction).

Council Policy C07-015, Reduced Speed Zones for Schools (April 7, 2003) guides the City's current practice for the creation of school zones. Highlights of the policy include:

- A speed limit of 30 km/h is installed at all elementary and high schools,
- Reduced speed limit is in effect from 8 a.m. to 5 p.m., Monday to Friday from September 1 to June 30, and
- End of school zone is marked with a sign indicating maximum speed.

The following guidelines were used to determine the size and location of the existing school zones:

- The school zone should be considered on the street along the school frontage, and if required, on the flankage based on an engineering review and study of pedestrian activity.
- The school zone should be centered at the location(s) where children cross a roadway. This would include major crossing points on the street along the school frontage and major crossing points along the side of the school.
- Extension of the school zone should include up to the school property lines. The only case a school zone can extend past school property lines is to include an important crosswalk.
- The school zone should not include park space or residential housing. These areas are often far from the school site which leads to driver's noncompliance to the speed limit.
- The beginning and ending points of the school zone are selected with appropriate consideration for the location of traffic control devices that may affect the implementation of the school speed limit zone.
- A school zone may be installed where there is a roundabout, a signalized or stop-controlled intersection (if there are concerns related to sight distance), and in other situations determined by an engineering study.
- In general, the length of a school zone should not be less than 200 metres.

2.3. PLAYGROUND AREAS AND ZONES

Playground areas (i.e. awareness signs only) are installed based on requests and an engineering review of the conditions for the playground. Playground area signs raise driver awareness of the proximity of a playground; however, the speed limit is not reduced.

There is no existing policy regarding playground zones in the City of Saskatoon.

2.4. AREAS OF HIGH CONCENTRATION OF SENIORS

Saskatoon has not established reduced speed zones in areas with a high concentration of seniors. The speed limit on the streets in these areas is 50 km/h unless otherwise noted in the Traffic Bylaw.

2.5. NEIGHBOURHOOD BIKEWAYS

Saskatoon has not established reduced speed limits for streets designated as neighbourhood bikeways. The speed limit on these streets is 50 km/h unless otherwise noted in the Traffic Bylaw.

Currently, the only designated bikeway in Saskatoon is 23rd Street West (i.e. Blairmore Bikeway). Neighbourhood bikeways along 14th Street, Dudley Street, and 31st Street have been approved in principle and as Saskatoon's all ages and abilities (AAA) cycling network expands, more streets may be designated as neighbourhood bikeways in the future.

3. SPEED DATA

Approximately 650 speed studies have occurred in direct response to concerns related to vehicle speeds in neighbourhoods since 2014. The speed study locations are shown in Figure 3.

The Administration uses the 85th percentile vehicle speed to verify whether a speeding issue exists. According to Council Policy C07-029 – Traffic Calming Policy, if the 85th percentile speed is greater than the speed limit plus 10% (i.e. 55 km/h on a residential street), then the street is eligible for traffic calming. Table 1 and Table 2 show a summary of speed data collected as part of the Neighbourhood Traffic Review program.

Table 1: 85th Percentile Operating Speed Data Summary during Regular Hours (2014-2020)

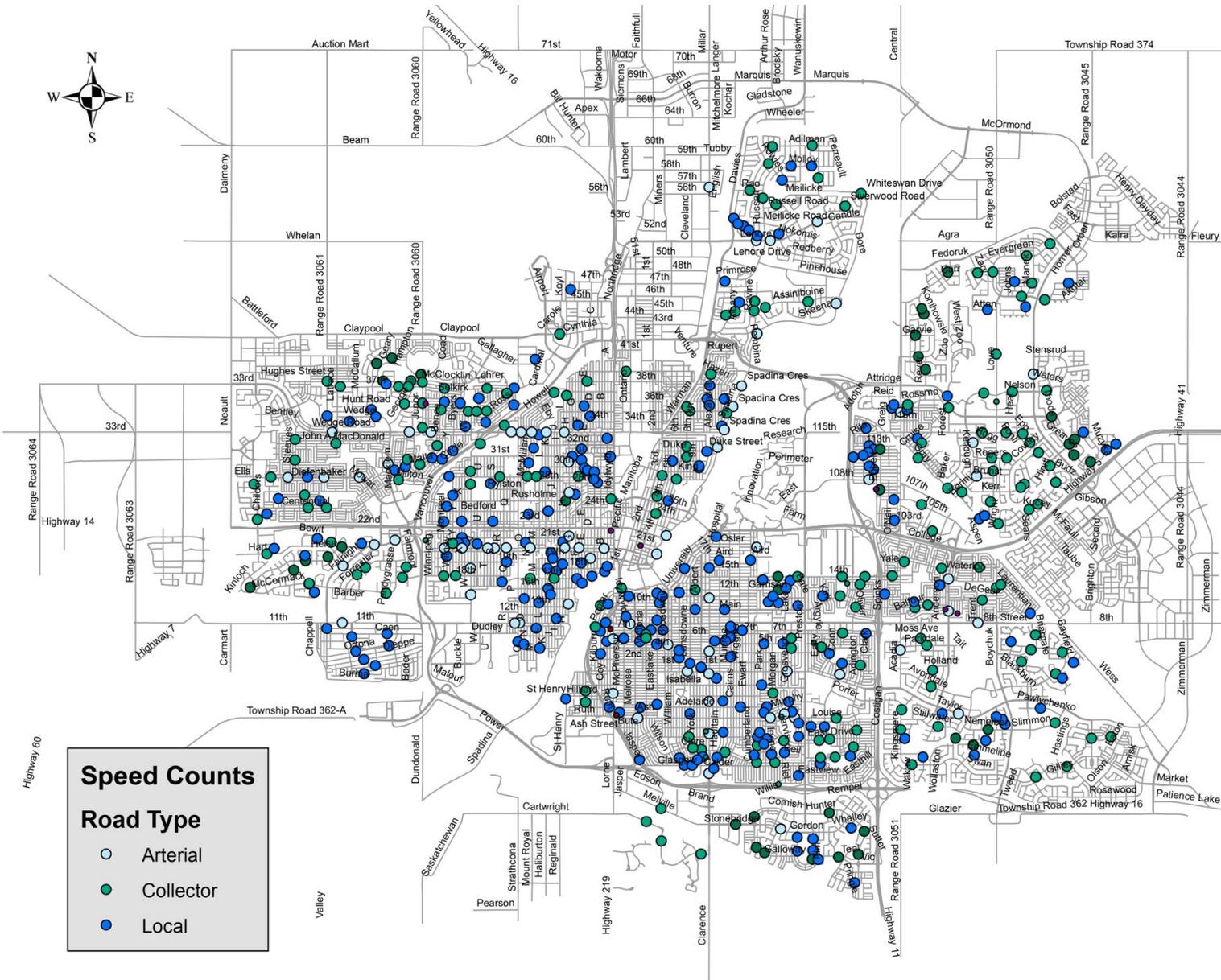
Road Type	Road Width	Average Speed (km/h)	Number of Studies
Arterial	≤11m	51	3
	12m to 13m	54	36
	14m to 16m	58	15
	≥17m	57	28
Collector	≤11m	53	22
	12m to 13m	52	148
	14m to 16m	56	71
	≥17m	50	1
Local	≤11m	42	148
	12m to 13m	47	94
	14m to 16m	46	6
	≥17m	52	6

*Temporary traffic calming installations may still be under evaluation and subject to modification if found to be ineffective.

Table 2: 85th Percentile Operating Speed Data Summary during School Hours (2014-2020)

Road Type	Road Width	Average Speed (km/h)	Number of Studies
Arterial	≤11m	NA	0
	12m to 13m	38	6
	14m to 16m	NA	0
	≥17m	44	5
Collector	≤11m	35	4
	12m to 13m	40	19
	14m to 16m	39	11
	≥17m	NA	0
Local	≤11m	36	17
	12m to 13m	39	11
	14m to 16m	NA	0
	≥17m	33	2

Figure 3: Locations of Speed Studies Completed (2014-2020)



4. COLLISION DATA

The Saskatchewan Government Insurance (SGI) provides collision data to the City of Saskatoon once per year. Their collision records include collisions resulting in property damage of \$5,000 or more, and police-reported collisions, as per the guidelines set in Saskatchewan's *The Traffic Safety Act*. The most recently available five-year collision data (2015 to 2019) was provided by SGI.

During Neighbourhood Traffic Review meetings with residents, Transportation staff often hear concerns regarding near misses and close calls. These types of interactions between road users are not captured by collision records.

4.1. COLLISION HISTORY - CITY-WIDE

In Saskatoon, between 2015 and 2019, there have been 38,049 collisions shown in Table 3, 27 collisions resulting in fatality(ies) shown in Figure 4 by road user type, and 199 collisions resulting in severe injury(ies) illustrated in Figure 5 by road user type.

Severe injuries include:

- an injury that prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred, including: severe lacerations, broken or distorted limbs, abdominal injuries, unable to leave the collision scene without assistance; or,
- an injury from which the victim enters a state of unconsciousness at or when taken from the collision scene.

People walking, riding bikes, or motorcyclists are considered vulnerable road users because they are at increased risk for injury or death in a vehicle collision due to lack of protection or minimal protection and the weight difference between themselves and motor vehicles.

Table 3: Total Vehicle Collisions in Saskatoon (2015 to 2019)

Type	2015	2016	2017	2018	2019
Vehicle Driver and Passenger Total Collisions	7,728	7,350	7,697	7,160	7,119
Motorcyclist Total Collisions	58	40	30	25	30
Cyclist Total Collisions	70	77	55	64	84
Pedestrian Total Collisions	88	99	105	80	90
Total Collisions	7,944	7,566	7,887	7,329	7,323

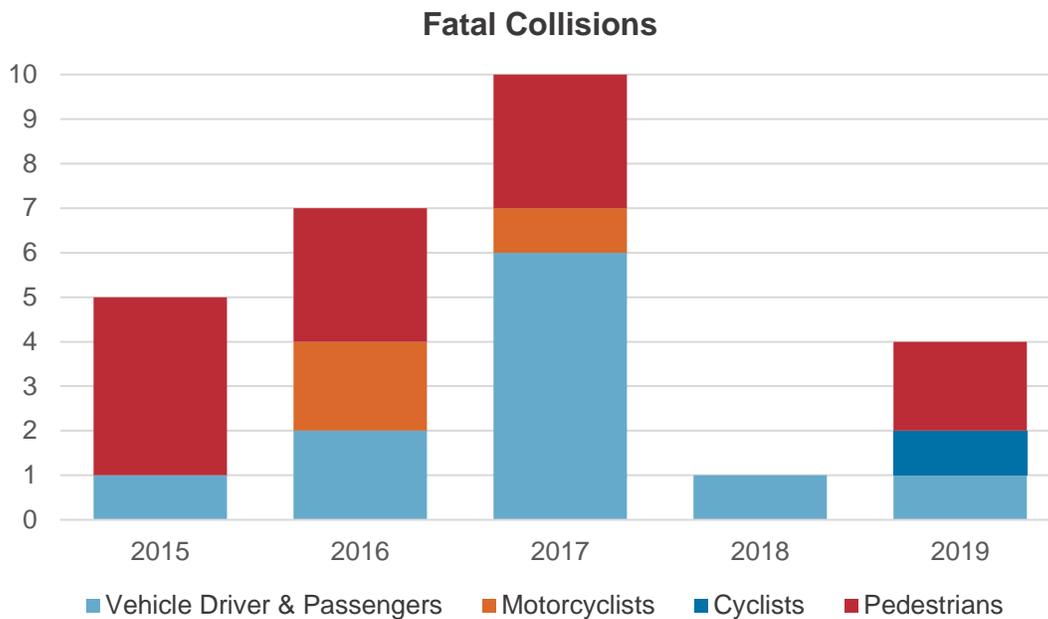


Figure 4: Vehicle Fatal Collisions in Saskatoon (2015 to 2019)

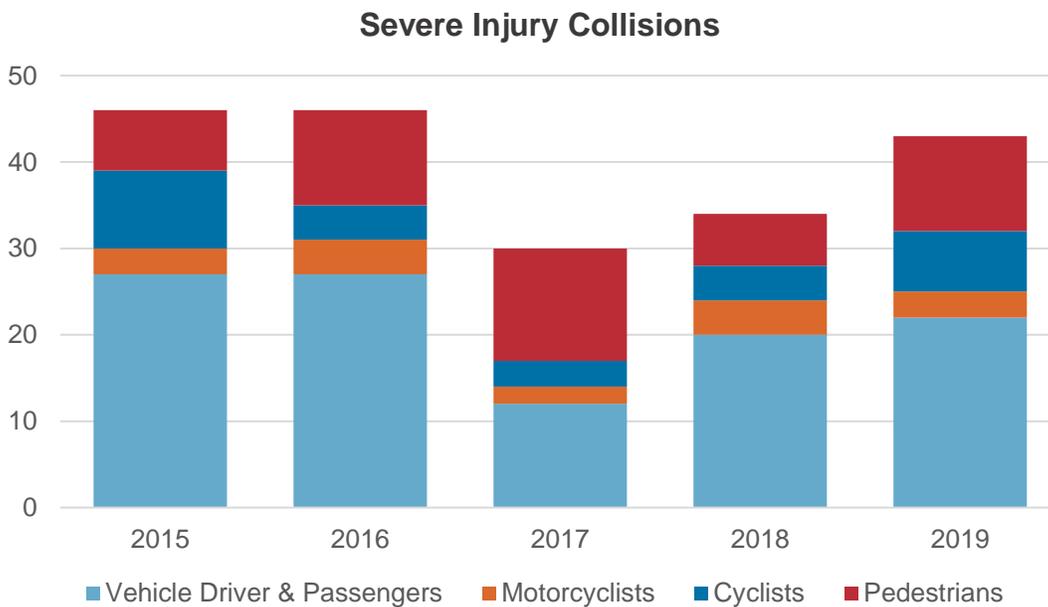


Figure 5: Vehicle Severe Injury Collisions in Saskatoon (2015 to 2019)

As shown in Figure 4 and Figure 5, collisions resulting in severe injuries and fatalities affect all road users and are trending up. Note that the collisions shown in these figures may have resulted in one or more fatalities and/or severe injuries.

4.2. COLLISION HISTORY - BY STREET CLASSIFICATION

In Saskatoon, between 2015 and 2019, as shown in Figure 6, 51% of collisions occurred on arterial streets, 14% of collisions occurred on collector streets, 17% of collisions occurred on local streets, and 18% of collisions occurred on other types of streets (highways, expressways, ramps, etc.).

Total Collisions by Street Classification

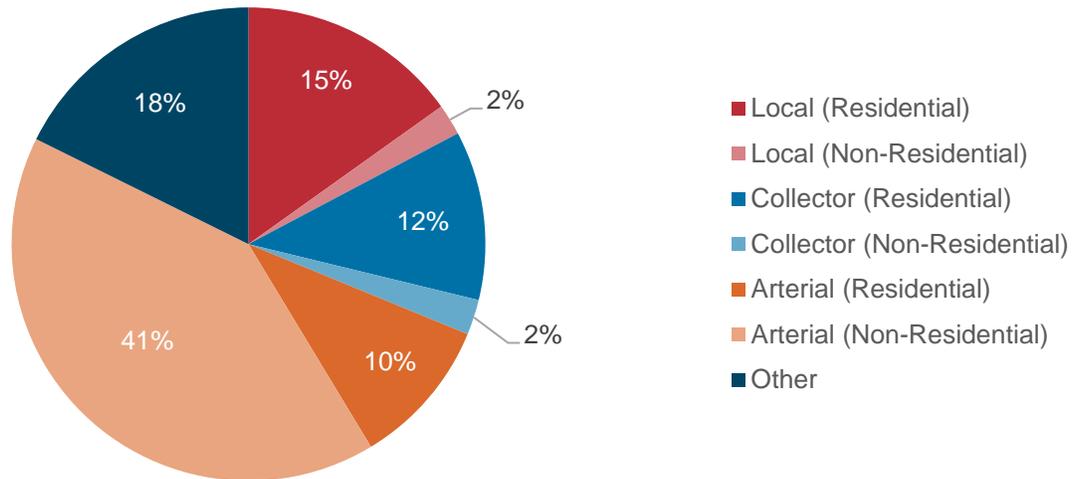


Figure 6: Vehicle Collisions in Saskatoon by Street Classification (2015 to 2019)

As shown in Figure 7, collisions resulting in fatality(ies) occurred on arterial streets (52%), collector streets (7%), local streets (15%), and other types of streets (26%).

Fatal Collisions by Street Classification

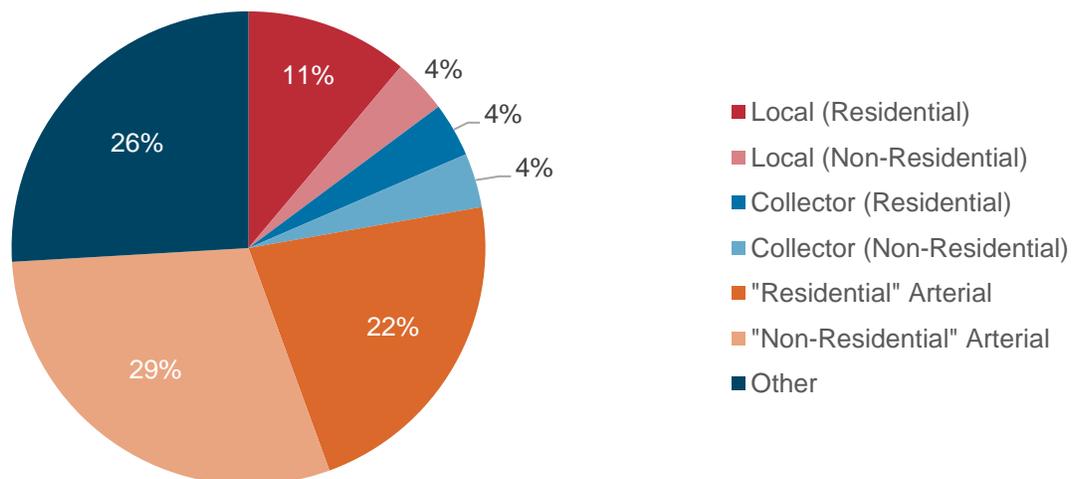


Figure 7: Vehicle Fatal Collisions in Saskatoon by Street Classification (2015 to 2019)

As shown in Figure 8, collisions resulting in severe injury(ies) occurred on arterial streets (65%), collector streets (15%), local streets (7%), and other types of streets (14%). Due to rounding, numbers in this figure do not add up to 100%.

Severe Injury Collisions by Street Classification

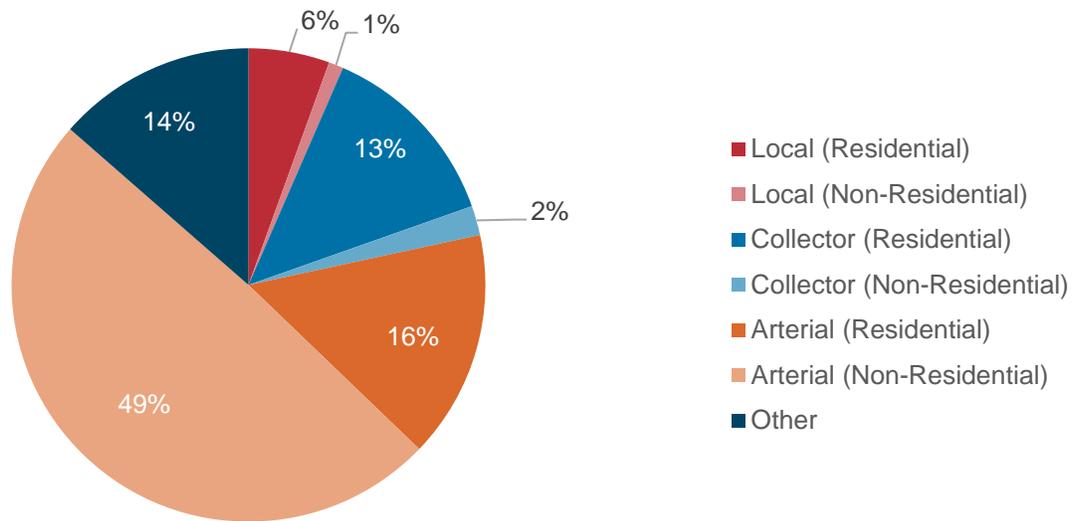


Figure 8: Vehicle Severe Injury Collisions in Saskatoon by Street Classification (2015 to 2019)

As showed in the figures above:

- 37% of the total vehicle collisions occurred on streets with adjacent residential land uses,
- 37% of collisions resulting in fatality(ies) occurred on streets with adjacent residential land uses, and
- 35% of collisions resulting in severe injury(ies) occurred on streets with adjacent residential land uses.

4.3. COLLISION HISTORY - STREETS WITH RESIDENTIAL LAND USES

Collision data specific to Saskatoon streets with residential land uses was also reviewed. Total collisions are shown in Figure 9; collisions resulting in fatality(ies) are shown in Figure 10; and collisions resulting in death(s) or severe injury(ies) are shown in Figure 11.

Between 2015 and 2019, there were 14,020 vehicle collisions; 10 collisions which resulted in fatality(ies); and 68 collisions which resulted in severe injury(ies) on streets with adjacent residential land uses.

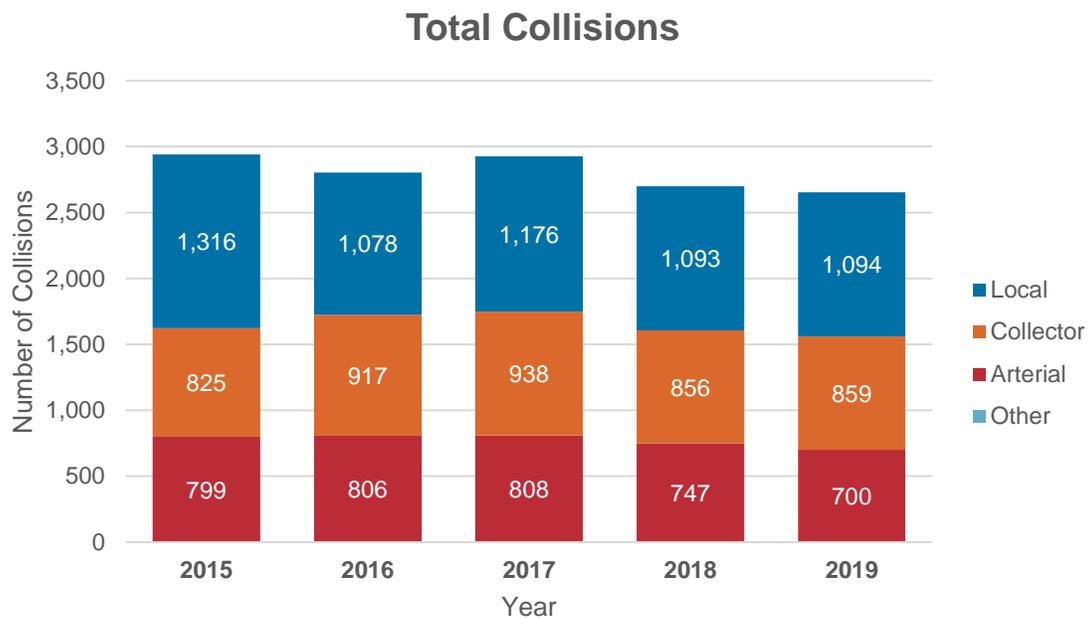


Figure 9: Total Vehicle Collisions for Streets with Residences in Saskatoon (2015 to 2019)

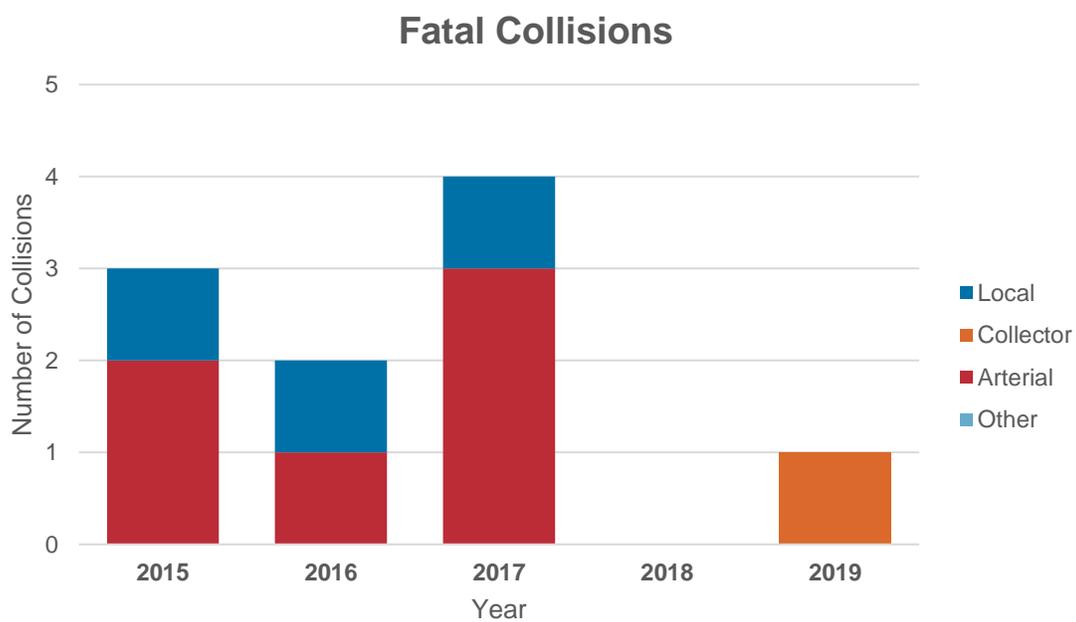


Figure 10: Vehicle Fatal Collisions for Streets with Residences in Saskatoon (2015 to 2019)

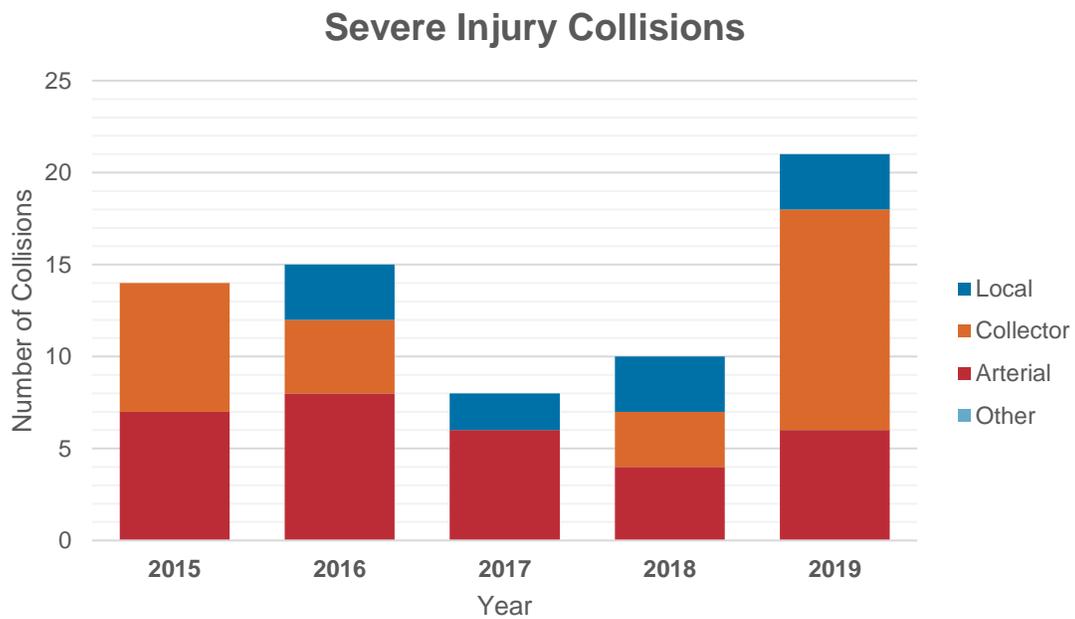


Figure 11: Vehicle Severe Injury Collisions for Streets with Residences in Saskatoon (2015 to 2019)

A map of the locations for the total vehicle collisions on Saskatoon streets with residences is included in Figure 12. A map of the locations for vehicle collisions that resulted in fatality(ies) or severe injury(ies) is shown in Figure 13.

Figure 12: Map of Total Collisions for Streets with Residential Land Uses (2015-2019)

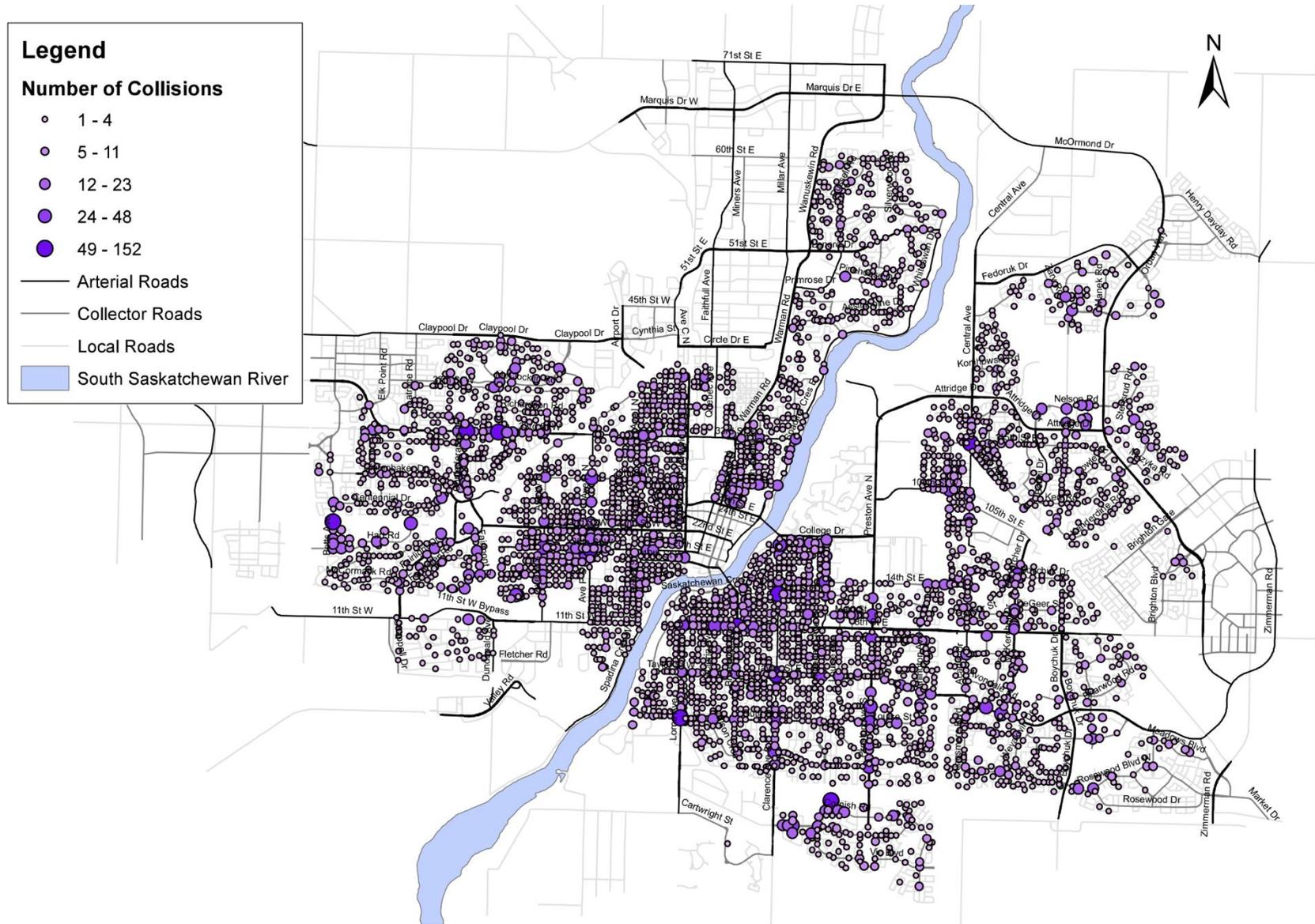
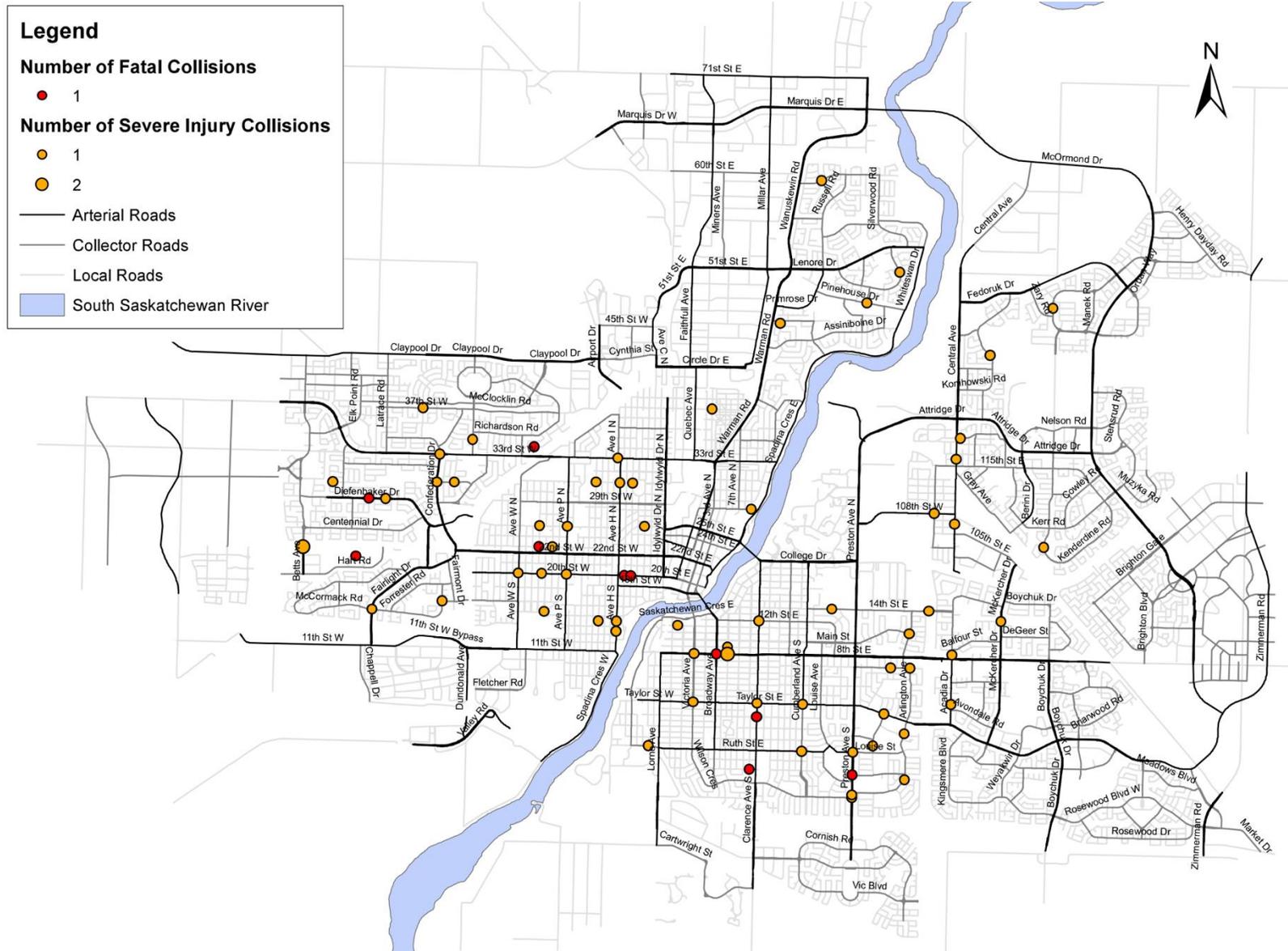


Figure 13: Map of Fatal or Severe Injury Collisions for Streets with Residential Land Uses (2015-2019)



4.4. SASKATCHEWAN HEALTH AUTHORITY COLLISION DATA

The Saskatchewan Health Authority (SHA) has collision information from hospital records. The hospital records may capture collisions that are not reported to SGI or Saskatoon Police Service. The Saskatoon Health Region reported this collision information in May 2016 as part of their Community Views, Unintentional Injury report. Highlights of their report include:

- Motor vehicle traffic collisions are the leading cause of injury-related death for Canadians under the age of 25 years. In 2010, Saskatchewan had the highest age standardized mortality rates from motor vehicle collisions in Canada, double the national average.
- Equity is a major concern in motor vehicle injuries. In 2012, the difference in rates of motor vehicle injury hospitalizations between those living in the lowest and highest income levels was greatest in Saskatchewan compared to any other province in Canada.
- Low socio-economic status is associated with child pedestrian injury rates. Increased speeds of traffic, more streets to cross on the way to school and walking unaccompanied to school have been cited as contributing factors to higher injury rates among children living in lower socio-economic areas.
- Pedestrian injury hospitalization rates vary by age group. Between 2008 and 2013, 15 to 24 years old males and females 65 years and older had the highest hospitalization rates for pedestrian injuries.

5. LITERATURE REVIEW

5.1. RELATIONSHIP BETWEEN SPEED AND TRAFFIC SAFETY

5.1.1. Stopping Distance

Speed affects the stopping sight distance of a driver. According to the Transportation Association of Canada (TAC) (2017), the stopping sight distance is defined as the required distance for a driver to see an object and bring the vehicle to a complete stop without crashing into the object.

Figure 14 shows the total stopping distance which includes a driver’s reaction time and braking distance on dry roadways (National Association of City Transportation Officials, 2020).

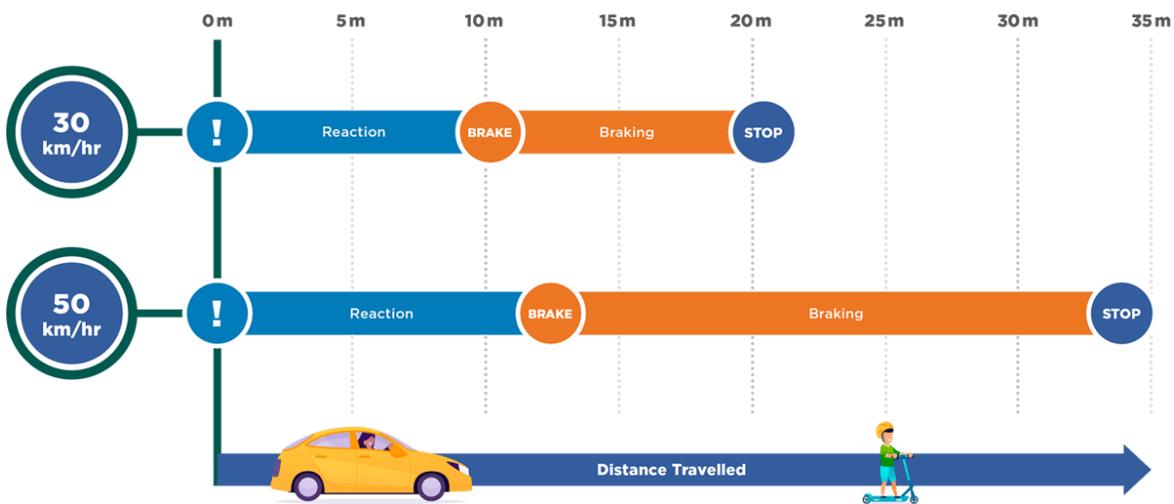


Figure 14: Driver Reaction Time and Stopping Sight Distance

Drivers travelling at higher speeds travel farther before they can react. Vehicles travelling at higher speeds take longer to come to a complete stop. Vehicles travelling on wet or snow/ice covered streets require longer braking distances.

Table 4 shows the calculated minimum stopping sight distance on level and wet roadways for automobiles. The table shows the required stopping sight distance at different vehicle speeds and indicates that speed increases stopping sight distance; as speeds increase, a driver has less time to stop and avoid a collision.

Table 4: Stopping Sight Distance

Vehicle Speed (km/h)	Stopping Sight Distance (m)
30	31.2
40	46.2
50	63.5

5.1.2. Visual Field

Increasing speed also narrows the visual field and limits the perception of surrounding activity. According to the United States Federal Highway Administration's Guidelines for the Visual Impact Assessment of Highway Projects, Figure 15 shows how the field of vision for a driver moving along a highway is affected by speed. This indicates that the driver's viewshed decreases as speed increases.

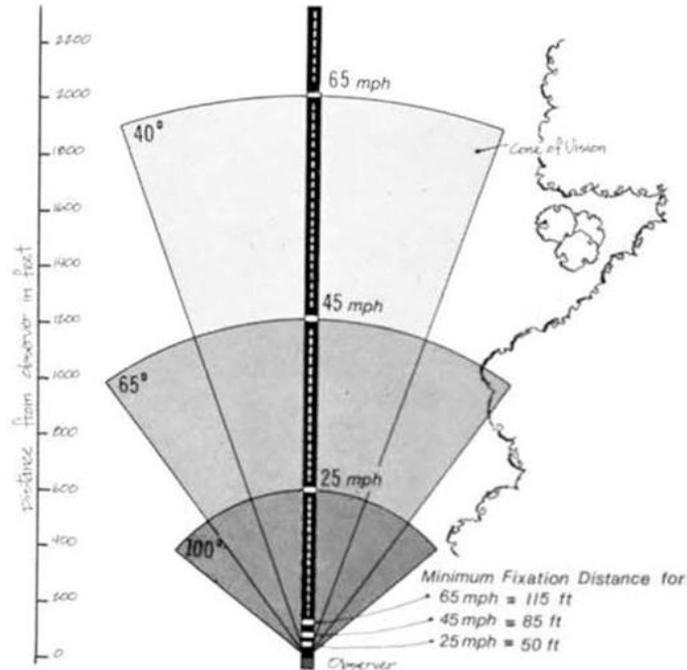


Figure 15: Dynamic Viewsheds and Speed (Source: U.S. Bureau of Land Management, 2008)

Drivers travelling at higher speeds have a narrower field of vision. For example, one study found that drivers travelling at 40 km/h are more able to notice what is happening around them than drivers travelling at 70 km/h whose focus is more on what is right in front of them (National Association of City Transportation Officials, 2020), as illustrated in Figure 16.

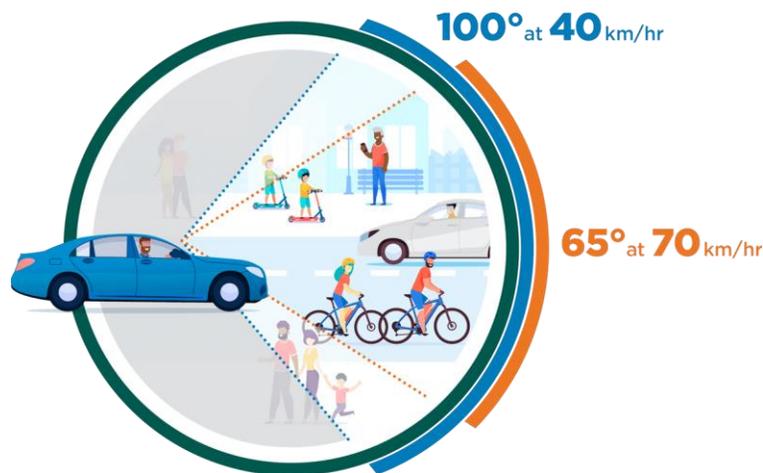


Figure 16: Field of Vision by Speed

Slower speeds reduce stopping sight distance, promote visibility, and increase awareness of potential conflicts (TAC, 2017).

5.1.3. Road User Risk

There is a direct relationship between vehicle speed and a vulnerable road user's survivability and the severity of injury when involved in a collision as shown in Figure 17 below. As shown by the graph, the vulnerable road user risk of death drops significantly at 40 km/h and the vulnerable road user risk of severe injury drops significantly at 30 km/h.

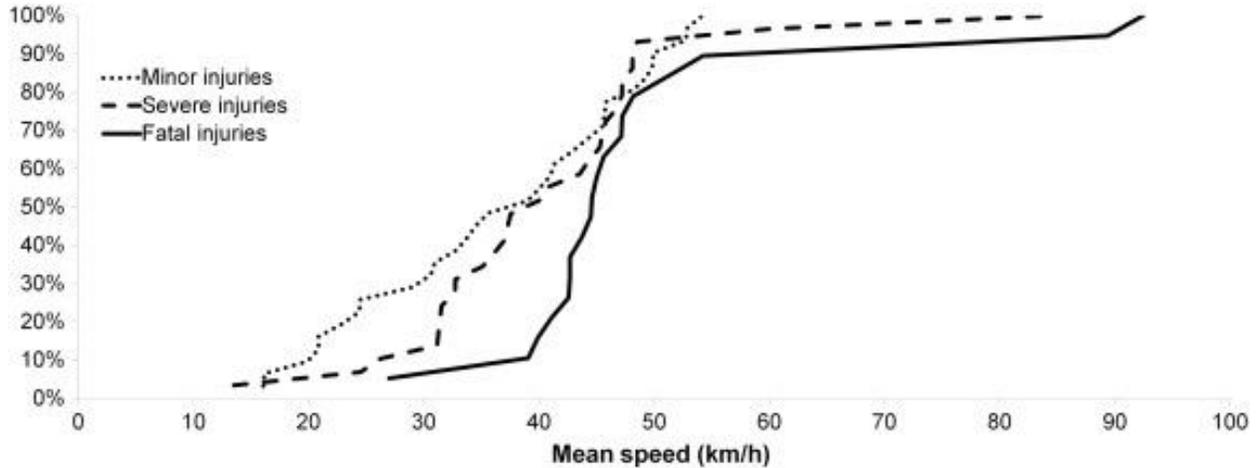


Figure 17: Vulnerable Road User Survival Rate
(Vulnerable road user risk of severe injury or death vs mean speed)

A study by Jurewicz et. al. (2016) shows that as vehicles travel faster, the risk of death to pedestrians and cyclists involved in a vehicle collision rises dramatically, as shown in Figure 18.

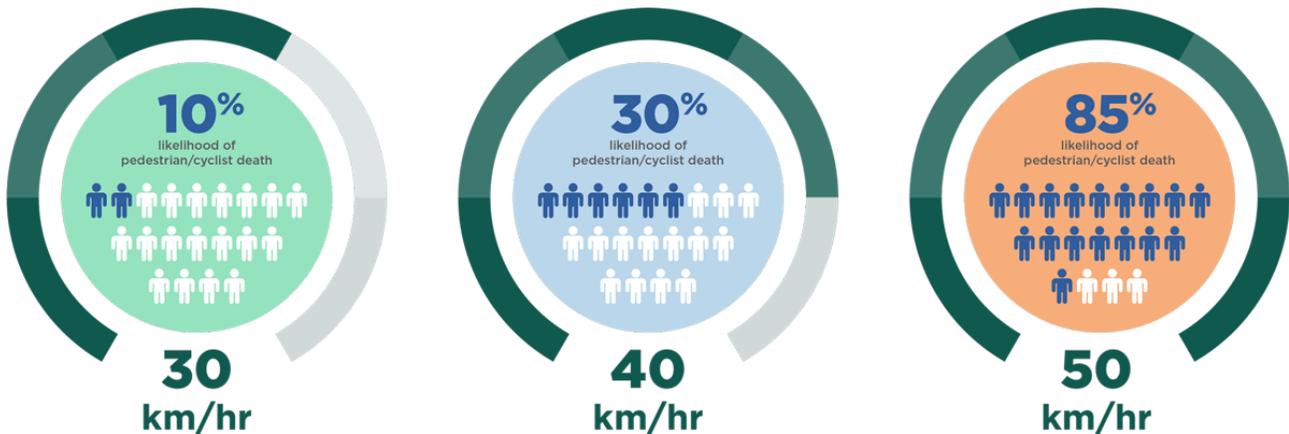


Figure 18: Likelihood of Pedestrian/Cyclist Death

The dramatic increase in risk of death or serious injury at faster speeds is also true for those in a vehicle, particular for head-on collisions or side-impact collisions when a vehicle turns in front of another, as illustrated in Figure 19.

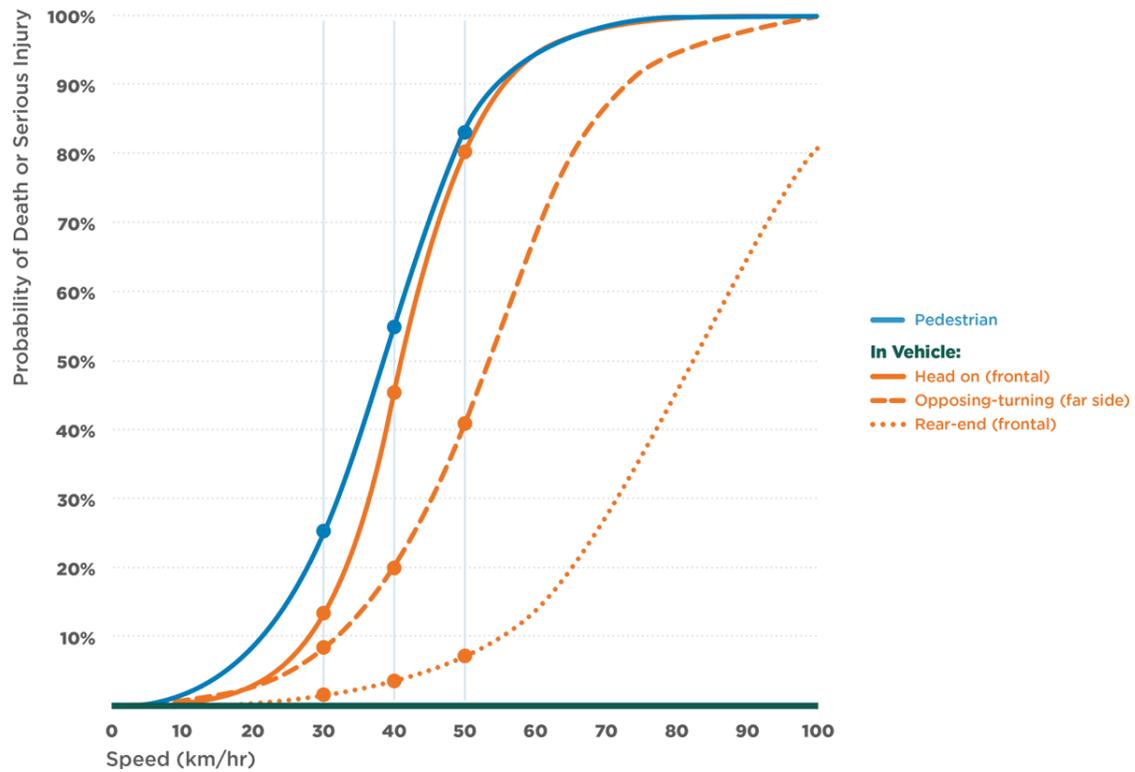


Figure 19: Probability of Death or Serious Injury (Source: Jurewicz et. al., 2016)

5.2. ESTABLISHING SPEED LIMITS

The Federal Highways Administration's (FHWA) Methods and Practices for Setting Speed Limits: An Informational Report outlines the various methods currently in practice for setting speed limits, including the Road Risk Method traditionally used in Canada and the Safe Systems Approach, which is gaining momentum across the globe. The findings from the report are summarized below.

- The most recent and statistically robust research on speed and collision occurrence generally indicates that, **all other factors being equal, increased speeds increase collision occurrence.**
- **Lowering the speed limit will reduce collision risk and raising the speed limit will increase collision risk.**
- The principal challenge in an injury minimization approach to setting speed limits is to manage collision energy so that no user is exposed to impact forces capable of causing death or serious injury. **Driver expectancies result in operating speeds that are higher than the target speeds of an injury minimization approach.**
- Whether the safety gains/losses associated with the change in the speed limit is worthwhile must be examined in the context of maintaining reasonable mobility and other system objectives. In addition, the policy context must be considered because the relationship between travel speed and speed limits indicates that **the percentage of violators increases when speed limits are lowered and decreases when speed limits are increased.**

City Limits – Setting Safe Speed Limits on Urban Streets, published in 2020 by the National Association of City Transportation Officials (NACTO) indicates:

- The United States trend toward larger, more dangerous vehicles is only growing. Larger vehicles are more lethal than small ones for two main reasons: they are heavier, which increases the force of the impact when combined with speed; and they have a taller frame, which increases the likelihood that, if struck, a person (especially a child) will be pulled under the vehicle rather than pushed onto the hood.
- A growing body of research shows that drivers base their decisions at least partially on the speed limit. When they see higher posted limits, and see the resulting increased speed of their peers, they drive faster too, which results in an increased speed of the street overall.

5.2.1. Road Risk Method

Canadian municipalities traditionally use the Road Risk Method to set speed limits. With the Road Risk Method, the speed limit is determined by the risks associated with the physical design of the road and the expected traffic conditions. The rationale for this method is to set the speed limit according to the function or classification of the street. Speed limit adjustments may be made based on various road and roadside design features which could reduce or introduce safety risk.

A national guidebook, Canadian Guidelines for Establishing Speed limits, was published in November 2009 by the Transportation Association of Canada (TAC). This document provides an evaluation tool to assess appropriate speed limits based primarily on the classification, function, and physical characteristics of a roadway.

5.2.2. Safe System Approach

With a Safe Systems approach, speed limits are set according to the collision types that are likely to occur, the impact forces that would result from these collision types, and the human body's tolerance to withstand these forces. The premise of the Safe Systems approach is that it is unethical to create a situation where fatalities are a likely outcome of a collision in order to reduce delay, fuel consumption, or other societal objectives.

The Safe Systems approach recognizes that system designers (i.e. transportation engineers), road users (i.e. all modes) and system operators (i.e. roadways and operations, traffic signal specialists, police, transit operators) must work together on safety. It is a shared responsibility with everyone focused on safety. The concepts of the Safe System approach listed by the Institute of Transportation of Engineers (ITE) (2020) are:

- Human beings can make mistakes that lead to road collisions.
- The human body by nature has a limited ability to sustain collision forces.
- It is a shared responsibility among stakeholders (road users, road managers, vehicle manufacturers, etc.) to take appropriate actions to ensure that road collisions do not lead to severe injuries or fatalities.
- All parts of the system must be strengthened so that if one part fails, road users are still protected.
- A proactive approach should be taken to making the mobility system safe, rather than waiting for events to occur and reacting.
- No death or serious injury should be accepted in the mobility system, and lack of safety should not be a trade-off for faster mobility.
- It is critical that the key risk factors that contribute significantly to collisions are identified and understood.

5.3. SCHOOL AND PLAYGROUND AREAS AND ZONES

A national guidebook, School and Playground Areas and Zones: Guidelines for Application and Implementation, was published in October 2006 by the Transportation Association of Canada (TAC).

This document outlines best practices and includes the following descriptions:

- Area – A section of roadway adjacent to a school or playground that is denoted by school area or playground area signage; area signage is intended only to create awareness.
- Zone – A section of roadway adjacent to a school or playground that is denoted by school area or playground area signage with a reduced speed limit sign.

The TAC guideline provides the following guidance on signing for school zones and playground zones:

- In addition to the appropriate area warning sign, all school zones and playground zones are to be marked with:
 - A sign denoting:
 - Reduced speed limit
 - Effective times and applicable days
 - A sign denoting the end of the zone:
 - For local roads in residential areas only, an “End School Zone” or “End Playground Zone” sign may be provided. This should be considered where there is a greater risk of vehicles accelerating to an unsafe speed at the end of the zone.
 - Alternatively, a maximum speed sign reinstating the original speed limit may be used (City of Saskatoon current practice)
- Length of School Zones and Playground Zones:
 - The length of a school zone or playground zone should generally be no less than 100 metres in an urban environment.
- Guidelines for adjacent School Zones and Playground Zones:
 - Schools and playgrounds are frequently located adjacent to one another. If a school zone and a playground zone are necessary for adjacent sections of the same roadway, a single zone should be provided.
 - In general, it is suggested that a playground zone be installed to provide coverage over a longer period of the school day as well as on non-school days.
 - For playgrounds where the utilization and access are closely tied to the school operation, a school zone can be considered to cover both the school and the playground.
 - Where two schools are located adjacent to one another and both require school zones, then it is suggested that a single zone be provided.

The TAC guideline outlines the following for school areas and zones:

- School areas can be considered for roadways near elementary and middle schools, where there is a possibility of children entering the roadway.
- School areas are generally discouraged for high schools due to the student’s ability to understand traffic and to control their own movements.
- School zones are not required for preschools since younger children are typically accompanied by an adult.
- School zones are generally discouraged along “walk-to-school routes” away from the school vicinity, and on roadways where any of the following conditions exist:
 - School is located on an arterial road or freeway,
 - School grounds are fully fenced,
 - School is located an appreciable distance (e.g. greater than 50 metres) from an intersecting roadway,
 - The candidate roadway does not have a school entrance, and
 - The length of the school frontage is minimal (e.g. less than 50 metres).
- School zones or areas are unnecessary at post-secondary institutions.

5.4. AREAS WITH A HIGH CONCENTRATION OF SENIORS

There are no published standards or national guidelines for creating reduced speed zones in areas with a high concentration of seniors.

According to Canadian Council of Motor Transport Administrators (CCMTA) (2013), older pedestrians are more vulnerable due to the following reasons:

- Limited vision and hearing,
- Slower reaction time and decision making,
- Lower levels of attention,
- Reduced walking speed, and
- Greater injury severity due in part to their greater physical fragility.

Figure 20 was based on a report by Tefft (2011) which found that risks of severe injury or death are higher for older pedestrians.

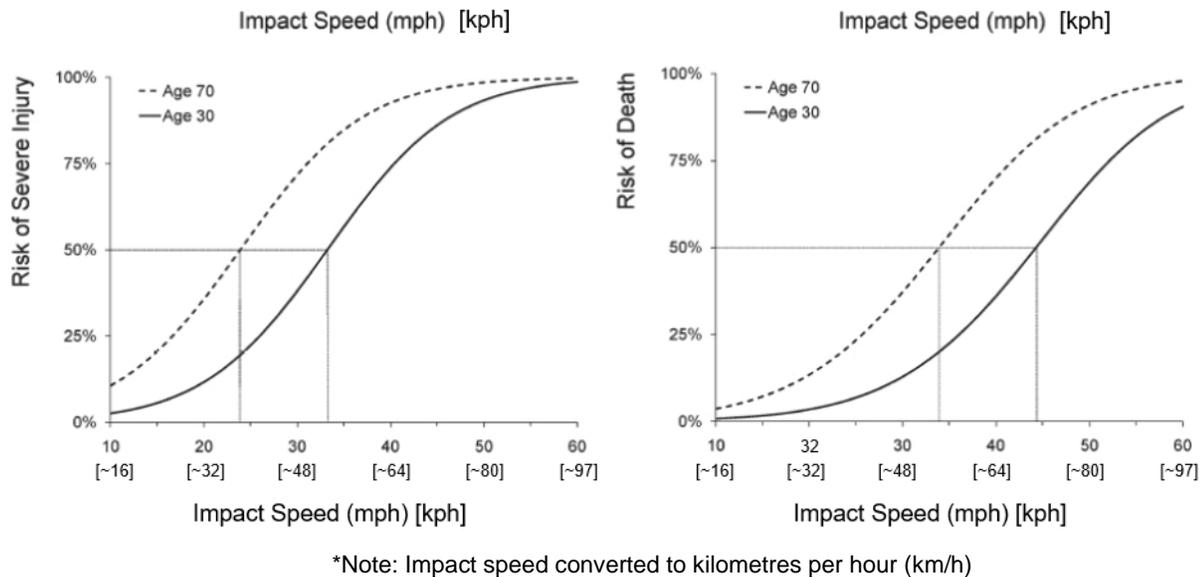


Figure 20. Average risk of severe injury (left) and death (right) for pedestrians age 30 vs. 70

5.5. NEIGHBOURHOOD BIKEWAYS

A neighbourhood bikeway is a type of all ages and abilities (AAA) cycling facility. It is a facility that is a shared roadway on streets with low traffic volumes and speeds, uses traffic calming measures to reduce traffic volumes and speeds, and where on-street parking is generally not impacted. Design treatments can include intersection treatments, signage, pavement markings, and traffic calming to reduce vehicular speeds. A bikeway significantly differs from a protected bike lane. Protected bike lanes physically separate cyclists from vehicles and pedestrians using a variety of treatment options. Physical separation is required when traffic speeds and volumes cannot be reduced to meet neighbourhood bikeway thresholds.

NACTO's Designing for All Ages & Abilities: Contextual Guidance for High-Comfort Bicycle Facilities indicates that:

- Motor vehicle speed and volume increase stress on bicyclists.
- Most people are not comfortable riding a bicycle immediately next to motor vehicles driving at speeds over 25 mph (40 km/h).
- When vehicular volumes and speeds are low, most people feel more comfortable bicycling in the shared roadway as they are able to maintain steady paths and riding speeds with limited pressure to move over for passing motor vehicles. However, as motor vehicle volume increases past 1,000 to 2,000 vehicles per day (or roughly 50 vehicles in the peak direction per peak hour), most people biking will only feel comfortable if vehicle speeds are kept below 20 mph (32 km/h).

According to TAC's Geometric Design Guide for Canadian Roads, unseparated bikeways such as neighbourhood bikeways provide suitable conditions for bicyclists where motor vehicle speeds are 30 km/h or less and where motor vehicle volumes are less than 2,500 vehicles per day.

6. JURISDICTIONAL REVIEW

Municipality	Residential Speed Limits		Playgrounds and School Areas and Zones		Senior 'Reduced Speed' Zones		Reduced Speeds for Neighbourhood Bikeways	
	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion
Calgary	Speed limit is 50 km/h	<ul style="list-style-type: none"> The Administration completed a thorough review of various options to reduce operating speeds in neighbourhoods through changes in the speed limit on streets. In February 2021, Council voted to reduce the speed limit on residential and some collector streets in neighbourhoods from 50 km/h to 40 km/h. Implementation will be through a bylaw change for the default speed limit and signage for all streets with speed limits higher than 40 km/h. 	<ul style="list-style-type: none"> Speed limit of 30 km/h in playground zones (schools included in playground zones) 7:30 am to 9 pm 7 days a week, year-round 	Consolidated school zones and playground zones into a single zone with fixed hours	Does not use Senior 'Reduced Speed' Zones	<p>In the past, "Elderly Pedestrian Crossing" signs have been installed throughout the City in locations with a larger elderly population or by request.</p> <p>Recently, "Elderly Pedestrian Crossing" signs have not been installed and have been replaced by standard pedestrian crosswalk signage when life cycled.</p>	No response received	
Edmonton	<ul style="list-style-type: none"> Speed limit is 50 km/h for majority Speed limit will be 40 km/h in summer of 2021 	<ul style="list-style-type: none"> In the summer of 2021: <ul style="list-style-type: none"> Default speed limit is being reduced from 50 km/h to 40 km/h; this will primarily affect residential streets The speed limit within high pedestrian areas and the main street portions of Whyte Avenue and Jasper Avenue will also be reduced to 40 km/h A Public Hearing for the applicable bylaws was held on November 4, 2020. Following the Public Hearing, City Council passed the second and third readings of Charter Bylaw 19282, which reduces the city-wide default speed limit from 50 km/h to 40 km/h. 	<ul style="list-style-type: none"> Speed limit of 30 km/h in playground zones (schools included in playground zones) 7:30 am to 9 pm every day 	In 2018, the City of Edmonton evolved all Edmonton school zones into playground zones	Does not use Senior 'Reduced Speed' Zones		No response received	
Halifax	<ul style="list-style-type: none"> Speed limit is 50 km/h Speed limit is 40 km/h in three neighbourhoods 	<ul style="list-style-type: none"> The province considers speed limit reductions from municipalities on a neighbourhood-by-neighbourhood basis where streets have similar characteristics and a representative sample of streets are shown to meet specified criteria. In November 2020, speed limits were reduced from 50 km/h to 40 km/h in three neighbourhoods. 	<ul style="list-style-type: none"> Speed limit of 30 km/h in school zones No playground zones 	<ul style="list-style-type: none"> If the speed limit is 50 km/h, motorists must slow to a maximum of 30 km/h when children are present. If the posted limit is higher than 50 km/h, motorists must slow to a maximum of 50 km/h in school zones when children are present. During school hours, motorists must lower their speed and assume children are present. On weekends, evenings and holidays, motorists may drive the speed limit unless there are children near the school zone. 	Does not use Senior 'Reduced Speed' Zones		No response received	

Municipality	Residential Speed Limits		Playgrounds and School Areas and Zones		Senior 'Reduced Speed' Zones		Reduced Speeds for Neighbourhood Bikeways	
	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion
Hamilton	Speed limit is 50 km/h and 40 km/h	<ul style="list-style-type: none"> Speed limit is being reduced from 50 km/h to 40 km/h across 45 neighbourhoods (started in 2020, expected to take three years). New signs will be posted on both sides of the roadway creating a 'gateway' feature as people enter and exit residential neighbourhoods. Delivered through the Vision Zero implementation strategy, general public engagement was not undertaken. 	<ul style="list-style-type: none"> Speed limit of 30 km/h and 40 km/h in playground zones and school zones, choice of speed limit used is dependent on the posted speed limit for the street outside of the zone. All day, every day 	School zones are being reduced to 30 km/h (started in 2020, expected to take three years) over the next three years	Does not use Senior 'Reduced Speed' Zones	<p>The following will/may be implemented if there is a large population of seniors in a certain area:</p> <ul style="list-style-type: none"> "Seniors" tab with a Pedestrians Ahead sign if there is a large population of seniors in a certain area Extend walk/flushing-don't-walk times to accommodate seniors <p>The City of Hamilton does not change speed limits or install traffic calming measures specifically for that purpose.</p>	Does not currently have bike boulevards	Preparing a study of priority streets for bike boulevards
Lethbridge	Speed limit is 50 km/h	The default posted speed limit for most neighbourhoods is 50 km/h. There are a couple roads posted at 30 km/h. One road in Downtown is proposed to be 40 km/h.	<ul style="list-style-type: none"> Speed limit of 30 km/h in playground zones 8:30 am to one hour after sunset, year-round Speed limit of 30 km/h in school zones 7:30 am to 4:30 pm 		Does not use Senior 'Reduced Speed' Zones		Has two bike boulevards with a 30 km/h speed limit	
Martensville	Speed limit is 40 km/h	Not currently investigating a further reduction to the residential speed limit.	<ul style="list-style-type: none"> Speed limit of 30 km/h in playground zones All day, every day Speed limit of 30 km/h in school zones 8:00 am to 5:00 pm each weekday between September 1 and June 30 		Does not use Senior 'Reduced Speed' Zones		Not considering reduced speeds for neighbourhood bikeways	
Mississauga	Speed limit is 50 km/h, 40 km/h, and 30 km/h	<ul style="list-style-type: none"> In fall 2019, the City began lowering speeds to 40 km/h in 11 different neighbourhoods. In 2021, the City will expand this to reduce speed limits in all 150 neighbourhoods. New signs will be installed at the entrances and exits to all neighbourhoods which will indicate when the neighbourhood area speed limits are in effect. 30 km/h roadways were designed and constructed for this speed. 	<ul style="list-style-type: none"> Speed limit of 40 km/h in school zones 7:45 am to 5:00 pm each weekday between Sept 1 and June 30 No playground zones 	<ul style="list-style-type: none"> Speed limits in school zones will be lowered to 30 km/h. For schools located on most major roads, the speed limit will remain 40 km/h. Community safety zones will be established in all school zones. <ul style="list-style-type: none"> These are implemented where public safety is of special concern or where public safety concerns are evident. These should only be established when traffic enforcement is possible, and increased enforcement is both expected and reasonable. Many set fines, such as speeding and traffic signal related offences, are doubled within community safety zones. 	Does not use Senior 'Reduced Speed' Zones		No response received	

Municipality	Residential Speed Limits		Playgrounds and School Areas and Zones		Senior 'Reduced Speed' Zones		Reduced Speeds for Neighbourhood Bikeways	
	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion
Okotoks	Speed limit is 40 km/h	Lowered default speed limit to 40 km/h in 2015. There are some areas with a 30 km/h speed limit (e.g. areas with no sidewalks).	<ul style="list-style-type: none"> • Speed limit of 30 km/h in playground zones • 7:00 am to one hour after sunset • Speed limit of 30 km/h in school zones • 7:30 am to 5:00 pm on school days 		Does not use Senior 'Reduced Speed' Zones	The following have been implemented at locations known to have a higher percentage of seniors: <ul style="list-style-type: none"> • Lengthened crossing times at signals • Flashing beacons 	Not considering reduced speeds for neighbourhood bikeways	
Prince Albert	Speed limit is 40 km/h	Not currently investigating a further reduction to the residential speed limit.	<ul style="list-style-type: none"> • Speed limit of 30 km/h in school zones • 8:00 am to 5:00 pm on school days • No playground zones 		Does not use Senior 'Reduced Speed' Zones	Traffic calming installed in areas where there is a concentration of seniors would have to meet the requirements under the Traffic Calming Policy	Not considering reduced speeds for neighbourhood bikeways	
Red Deer	Speed limit is 50 km/h	Not currently investigating a reduced residential speed limit.	<ul style="list-style-type: none"> • Speed limit of 30 km/h in playground zones • 8 am to 9 pm each day • Speed limit of 30 km/h in school zones • 8 am to 4:30 pm each school day 	Combined zones are converted to playground zones.	Does not use Senior 'Reduced Speed' Zones	Requests for crosswalks adjacent to or within a block of a seniors building are usually received not requests for Senior 'Reduced Speed' Zones.	Not considering reduced speeds for neighbourhood bikeways	
Regina	Speed limit is 50 km/h	Not currently investigating a reduced residential speed limit.	<ul style="list-style-type: none"> • Speed limit is 30 km/h in playground zones and school zones • 7:00 am to 7:00 pm every day 	<ul style="list-style-type: none"> • Changes to school zones in September 2019 • Changes to playground zones in 2020 	Does not use Senior 'Reduced Speed' Zones		Not considering reduced speeds for neighbourhood bikeways	Has been discussed in the past but physical traffic calming measures or separating cycling lanes altogether is preferred
St. Albert	Speed limit is 50 km/h	<ul style="list-style-type: none"> • Reducing neighbourhood speeds (on collector and local streets) from 50 km/h to 40 km/h in May 2021. • Considering the following: <ul style="list-style-type: none"> ○ Increasing five arterial roadway speeds from 50 km/h to 60 km/h. ○ Increasing roadway speed on one street from 60 km/h to 70 km/h. 	<ul style="list-style-type: none"> • Speed limit of 30 km/h in playground zones • 8:30 am to one hour after sunset each day • Speed limit of 30 km/h in school zones • 8:30 am to one hour after sunset each school day 	<ul style="list-style-type: none"> • Considering the following: <ul style="list-style-type: none"> ○ Changing current elementary and junior high school zones to playground zones ○ Establishing a time of day for playground zones as 8 am to 8pm ○ Removing three existing playground zones (where no equipment exists) • Removing six existing short 30 km/h sections that are not associated with a playground or school zone 	Does not use Senior 'Reduced Speed' Zones		Not considering reduced speeds for neighbourhood bikeways	

Municipality	Residential Speed Limits		Playgrounds and School Areas and Zones		Senior 'Reduced Speed' Zones		Reduced Speeds for Neighbourhood Bikeways	
	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion
Toronto	Speed limit is 50 km/h, 40 km/h, and 30 km/h	<ul style="list-style-type: none"> In the Vision Zero 2.0 – Road Safety Plan Update report to City Council, staff outlined the plans to reduce speed limits on all local roads that have posted speed limits of 40 km/h or higher to 30 km/hr, with local roads in non-residential areas being an exception. 2020-2021 Implementation: <ul style="list-style-type: none"> Major arterials from 60 km/h to 50 km/h Minor arterials from 60 km/h to 50 km/h Collectors from 50 km/h to 40 km/h 2021-2026+ Implementation: <ul style="list-style-type: none"> Locals from 50 km/h or 40 km/ to 30 km/h 	Speed limit of 30 km/h or 40 km/h	<ul style="list-style-type: none"> A School Safety Zone is a designated stretch of roadway which includes school safety zone signs and a variety of measures such as watch your speed signs, improved pavement makings, flashing beacons, among other possible improvements. A Community Safety Zone (CSZ) is a designated stretch of roadway, recognized under provincial legislation, marked with community safety zone signs allowing the doubling of fines associated with speeding and, through the applicable sections of Bill 65, Safer School Zones Act, 2017, the use of an automated speed enforcement system. The implementation of 181 CSZs at schools is expected to be completed by the end of 2020. 	Has Senior Safety Zones	<ul style="list-style-type: none"> A Senior Safety Zone is a designated stretch of roadway which includes senior safety zone signs and a variety of measures such as increased crossing times, improved pavement markings, among other possible improvements. Currently staff are focusing on improving existing Senior Safety Zones prior to identifying additional locations for 2020. The improvements in these areas include: <ul style="list-style-type: none"> Implementing enhanced pavement markings and signage to raise awareness of the older adult population; Analysis of pedestrian crossing times at traffic signals to ensure that the lower speed of older adults crossing is accounted for in signal timings; and Conducting In-Service Road Safety Reviews to identify potential short term and long-term improvements including identification of interim or permanent road design improvements. 	Developing 'Quiet Street' cycling routes with a universal 30 km/h speed limit	<ul style="list-style-type: none"> Toronto is developing a number of "Quiet Street" cycling routes, where signs, pavement markings, and traffic calming are used to create comfortable cycling routes on quieter residential streets. Traffic calming is a key part of developing cycling routes which have sections where motor vehicles share the road with cyclists. A universal 30 km/h speed limit is planned for all of Toronto's "Quiet Street" type cycling routes.
Vancouver	<ul style="list-style-type: none"> Speed limit is 50 km/h Speed limit is 30 km/h in pilot neighbourhoods 	<ul style="list-style-type: none"> As of March 2021, the City of Vancouver has piloted its first 30 km/h slow zone (reduced from 50 km/h) in the Grandview-Woodland area Staff will be reporting back to Council in the fall with data results and public feedback, in hopes of informing other slow zones in the City and potential amendments to the provincial Motor Vehicle Act 	<ul style="list-style-type: none"> Speed limit of 30 km/h in playground zones and school zones Dawn until dusk 	School zones and playground zones will be changed to 24 hours per day, 7 days a week rather than restricted to dawn until dusk, hoping to have the signs changed by next spring	Does not use Senior 'Reduced Speed' Zones		Posts 30 km/h speed limits on designated bikeways	All designated residential bikeways are signed at 30 km/h and many have additional traffic calming (e.g. speed humps, curb bulges) and traffic diversion (e.g. restricted motor vehicle access) measures
Warman	Speed limit is 40 km/h	Not currently investigating a reduced residential speed limit.	<ul style="list-style-type: none"> Speed limit is 30 km/h in playground zones and school zones 8:00 am to 5:00 pm between Sept 1 and June 30 		Does not use Senior 'Reduced Speed' Zones	Have not considered any special needs for areas with high concentration of seniors	Not considering reduced speeds for neighbourhood bikeways	

Municipality	Residential Speed Limits		Playgrounds and School Areas and Zones		Senior 'Reduced Speed' Zones		Reduced Speeds for Neighbourhood Bikeways	
	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion	Current Practice	Discussion
Winnipeg	Speed limit is 50 km/h	<ul style="list-style-type: none"> • Pilot streets for speed limit reduction, one local and collector street in each ward (signing all cross-streets for now), some will be 30 km/h, some will be 40 km/h. A report will be presented in summer 2021. • Petition province to allow for gateway signage for a neighbourhood with speed limit reduction. • At the City's Executive Policy Committee (EPC) meeting in January, City Councillors voted against an idea to hold a plebiscite. 	<ul style="list-style-type: none"> • Speed limit of 30 km/h in school zones • 7:00 am to 5:30 pm each weekday between September 1 and June 30 • No playground zones 		Does not use Senior 'Reduced Speed' Zones		30 km/h speed limit pilot project to begin in 2021 for five of their 11 neighbourhood greenways / bike boulevards	

7. EFFECTIVENESS OF SPEED LIMIT REDUCTIONS

7.1. STREET DESIGN

Streets should be planned and designed to effectively support the movement of people of all ages and levels of mobility by providing appropriate and accessible facilities that support pedestrians, cyclists, transit users, and motor vehicles while integrating the street environment with existing and future land uses.

The City updated its design standards in 2020 to incorporate traffic calming principles as part of the concept plan of a neighbourhood. The most recent developments to be constructed with traffic calming devices are the Evergreen, Aspen Ridge, Rosewood, and Kensington neighbourhoods which included curb extensions, roundabouts, and narrow street lanes as integral street design elements.

The data collected during the neighbourhood traffic reviews for these neighbourhoods included speed data.

- [Evergreen Neighbourhood Traffic Review](#) showed that operating speeds in the Evergreen neighbourhood ranged from 37 km/h to 54 km/h,
- Rosewood and Lakewood Suburban Centre Neighbourhood Traffic Review showed that operating speeds in the Rosewood neighbourhood ranged from 48 km/h to 55 km/h, and
- [Pacific Heights and Kensington Neighbourhood Traffic Review](#) showed that operating speeds in the Kensington neighbourhood ranged from 28 km/h to 59 km/h.

These results indicate that the street design and traffic calming measures have been effective at keeping operating speeds within 5 km/h of the speed limit for most streets, and often well below the speed limit.

Despite the inherent traffic calming measures constructed in the neighbourhoods, many concerns regarding speeds were raised by the residents of these neighbourhoods for several streets. Residents requested lower speed limits and additional traffic calming measures such as speed display boards or speed humps.

7.2. MONTGOMERY NEIGHBOURHOOD

At its meeting held on May 24, 2016, City Council approved the Montgomery Place Neighbourhood Traffic Review, stating it be adopted as the framework for future traffic improvements in the area and that the speed limit on all local roads within the Montgomery Place neighbourhood be reduced from 50 km/h to 40 km/h.

Schedule No. 4 Maximum Speeds in Bylaw 7200, The Traffic Bylaw, was amended to reflect these changes and approved on June 27, 2016. 40 km/h speed signs were installed throughout the neighbourhood by September 1, 2016.

Speed data was collected after the speed limit change, and the results are summarized in Table 5.

Table 5: Montgomery Place Operating Speeds Before and After Speed Limit Reduction

Location	Location of Speed Study	Date of Speed Study	Before Speed (km/h)	Date of Speed Study	After Speed (km/h)	Difference (km/h)
Elevator Road	11 th Street to Caen Street	Oct 2015	50.4	May 2017	50.9	+0.5
Ortona Street	Haida Avenue to Crescent Boulevard	Sept 2015	46.4	May 2017	47.1	+0.7
Crescent Boulevard	Caen Street to Merritt Street	Oct 2015	50.2	May 2017	46.2	-4.0
Caen Street (regular hours)	Lancaster Boulevard to Crerar Drive	Sept 2015	49.1	Sep 2017	44.2	-4.9
Caen Street (school hours)	Lancaster Boulevard to Crerar Drive	Sept 2015	39.7	Sep 2017	38.3	-1.4

Based on the follow-up results from the speed limit reduction in the Montgomery Place neighbourhood, which was implemented with sign changes only, it is evident that signage changes can be effective on some streets but may not be effective across an entire neighbourhood.

7.3. OTHER JURISDICTIONS

7.3.1. Calgary

The City of Calgary consolidated school zones and playground zones into a single zone with fixed hours in 2016. The speed limit is 30 km/h in playground zones (schools included in playground zones). Playground zones are in effect from 7:30 am to 9:00 pm, 7 days a week, year-round.

The key findings of the evaluation, The Review of School and Playground Zone Harmonization in Calgary (September 2017), are summarized below:

- The mean traffic speed in playground zones decreased from 36 km/h to 30 km/h.
- The number of collisions involving pedestrians within the new playground zones decreased by 33%, with a 70% decrease between 5:30 p.m. and 9:00 p.m.
- The collision rate decreased from 0.049 to 0.011 collisions per million vehicle kilometers of travel per year.
- 58% of respondents knew the exact start time of school and playground zone, whereas 73% knew the end time. More than 80% of the respondents find it easier to remember the zone times with single zone type that is consistent throughout the year.

7.3.2. Edmonton

The City of Edmonton lowered the speed limit from 50 km/h to 40 km/h within six pilot residential communities in 2010. According to the Speed Limit Reduction on Residential Roads: A Pilot Project Report, the results of the speed and traffic analysis indicated the operating speeds were reduced after the implementation of the new residential speed limit of 40 km/h in the pilot project communities. The

operating speeds were consistently lower regardless of temporal factors like time of day and day of week.

The operating speed was found to vary with community development and the type of roadway network. Higher operating speeds were observed in newer (1970s/80s) communities, followed by grid-based communities and older (1950s/60s) communities. There were reductions in operating speed in all communities, regardless of network type. The largest reduction in operating speed was observed in newer communities, (11% reduction), compared to a 6% reduction in older communities and a 4% reduction in grid-based communities. However, newer communities still had the highest recorded speeds in the “After” period when compared to the older and grid-based neighbourhood designs.

Two random telephone surveys were completed to investigate the community perceptions of traffic safety within the six pilot communities. Based on the survey results, there was a significant decrease in speeding and concerns accompanied by a significant increase in safety. Overall, the multi-variate analysis has demonstrated that the pilot project was successful in improving the residents’ perceptions of traffic safety in their community.

7.3.3. Okotoks

The Town of Okotoks lowered the speed limit to 40 km/h in 2015. There has been a 31% reduction in total vehicle collisions, as a result of the speed limit reduction.

7.3.4. Portland

Residential speed limit reduction from 40 km/h (25 mph) to 32 km/h (20 mph) was completed in 2019.

Analysis indicates the 32 km/h (20 mph) speed limit reduced driving speeds. The reductions in speed are noteworthy due to the link to collision severity for vulnerable road users. Studies have found that even small reductions in speed can have large safety benefits, especially for pedestrians.

7.3.5. Seattle

Seattle reduced the speed limit on local streets to 20 mph (~30 km/h) and collector streets to 25 mph (~40 km/h) in a 2016 city-wide initiative.

There was a 22% reduction in collisions, 18% reduction in injury collisions, and a 54% reduction in the most dangerous speeders, who were driving over 40 mph (~60 km/h).

7.3.6. Toronto

The City of Toronto reduced speed limits in residential areas from 40 km/h to 30 km/h in 2015 and 2016 through a blanket approach.

There was a 28% decrease in the pedestrian motor vehicle collisions incident rate, and a 67% decrease in major and fatal injuries on streets with speed limit reductions.

8. REFERENCES

Canadian Council of Motor Transport Administrators (CCMTA), 2013. Countermeasures to Improve Pedestrian Safety in Canada.

City of Edmonton's Office of Traffic Safety, Speed Limit Reduction on Residential Roads: A Pilot Project. April 5, 2011. Retrieved May 10, 2021 from https://www.edmonton.ca/transportation/PDF/OTS_Speed_Limit_Reduction_Report.pdf.

El-Basyouny, K and El-Bassiouni, M.Y., 2013. Modeling and analyzing traffic safety perceptions: An application to the speed limit reduction pilot project in Edmonton, Alberta. Accident Analysis & Prevention, Volume 51. Retrieved January 28, 2021 from <https://www.sciencedirect.com/science/article/abs/pii/S0001457512003867>.

Federal Highway Administration (FHWA), United States Department of Transportation. Guidelines for the Visual Impact Assessment of Highway Projects. January 2015. Retrieved January 7, 2021 from https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx#fig62.

Federal Highway Administration (FHWA), April 2012. Methods and Practices for Setting Speed Limits: An Informational Report.

Institute of Transportation of Engineers (ITE), 2020. The Road to Zero: Taking a Safe System Approach. Retrieved January 7, 2021 from <https://www.ite.org/pub/?id=8B6264A1-D5A7-1560-D583-D90F54D8DDB9>.

Jurewicz, C., Sobhani, A., Woolley, J., Dutschke, J. and Corben, B., 2016. Exploration of Vehicle Impact Speed – Injury Severity Relationships for Application in Safer Road Design. Transportation Research Procedia. 14. 4247-4256. 10.1016/j.trpro.2016.05.396.

Kroyer, H.R.G., 2015. Is 30 km/h a 'safe' speed? Injury severity of pedestrians struck by a vehicle and the relation to travel speed and age. Retrieved January 7, 2021 from <https://www.sciencedirect.com/science/article/pii/S0386111214000235>.

Martin, M., 2016. Cognitive Psychology and Vehicle Speed. Retrieved January 7, 2021, 2021 from https://raisethehammer.org/article/3043/cognitive_psychology_and_vehicle_speed.

National Association of City Transportation Officials (NACTO), 2017. Designing for All Ages & Abilities: Contextual Guidance for High-Comfort Bicycle Facilities.

National Association of City Transportation Officials (NACTO), 2020. City Limits – Setting Safe Speed Limits on Urban Streets. Retrieved January 7, 2021 from https://nacto.org/wp-content/uploads/2020/07/NACTO_CityLimits_Spreads.pdf.

National Association of City Transportation Officials (NACTO), Urban Street Design Guide. Design Speed. October 2013. Retrieved January 7, 2021, 2021 from <https://nacto.org/publication/urban-street-design-guide/design-controls/design-speed/#footnotes>.

Saskatchewan Health Authority, Unintentional Injury Report, May 2016.
https://www.communityview.ca/infographic_shr_injury.html

Tefft, B.C., 2011. Car crashes rank among the leading causes of death in United States. AAA Foundation for Traffic Safety. Washington, DC.

The University of California Institute of Transportation Studies, 2020. Research Synthesis for the California Zero Traffic Fatalities Task Force.

Transportation Association of Canada (TAC), 2006. School and Playground Areas and Zones: Guidelines for Application and Implementation, Calgary

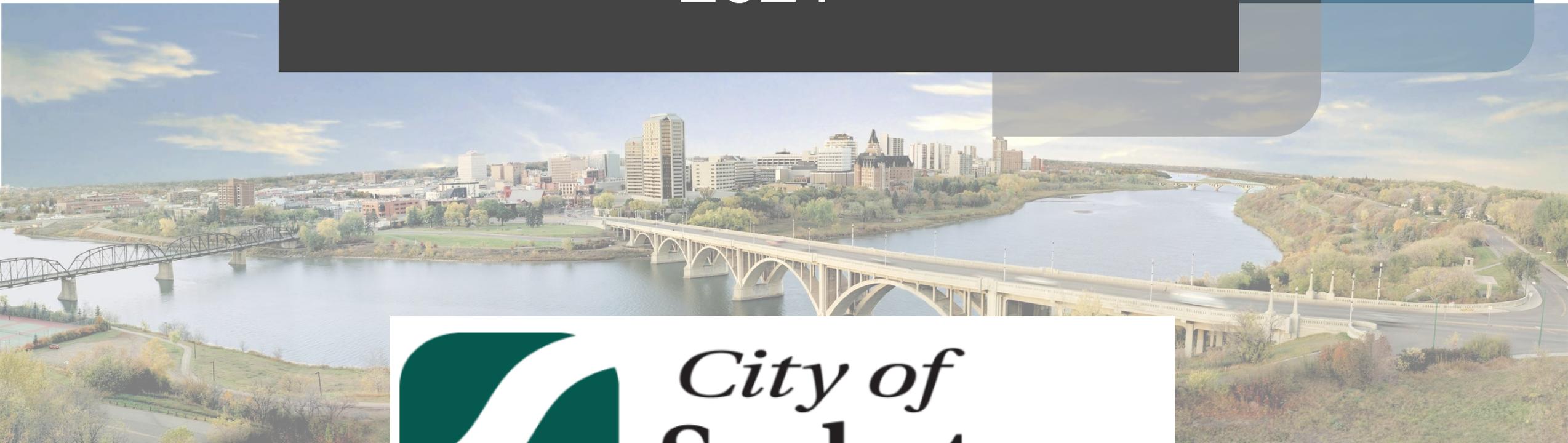
Transportation Association of Canada (TAC), 2009. Canadian Guidelines for Establishing Speed limits, Ottawa.

Transportation Association of Canada (TAC), 2017. Geometric Design Guide for Canadian Roads, Ottawa.

U.S. Bureau of Land Management, 2008. *Visual Resource Management Program* (Course 8400-05).

University of Pennsylvania School of Engineering, 2015. Vehicle Stopping Distance and Time. Retrieved March 4, 2021 from https://nacto.org/wp-content/uploads/2015/04/vehicle_stopping_distance_and_time_upenn.pdf.

Speed Limit Review Survey 2021



City of
Saskatoon

TABLE OF CONTENTS

Introduction	3
Purpose	3
Methodology	4
Interpreting this report	5
Key Findings	6
Detailed Findings	8
Respondent Profiles	16

PURPOSE

The City of Saskatoon commissioned a Speed Limit Review survey, to gain insights on public opinions/perceptions of the speed limits on residential streets and their opinions about possible speed limit reductions for various circumstances (e.g., school zones, playground zones, senior zones, residential streets).

The results of the survey will be presented to City Council to consider when they make decisions on any potential changes in speed limits.

METHODOLOGY

Fieldwork Dates	April 8 - 30, 2021 (Forum Research Data) / March 3 – May 4, 2021 (Open Link Data)
Method	Computer Assisted Telephone Interviewing (CATI), Computer Assisted Web Interviewing (CAWI)
Criteria for Participation	Residents within the City of Saskatoon who are 18 years of age or older (Forum Research Data) / No criteria (Open Link Data)
Sample Size	414 (Forum Research Data) / 14,970 (Open Link Data)
Average Length	3.69 minutes (Forum Research Data) / 3.5 minutes (Open Link Data)
Margin of Error	±4.82% (Forum Research Data)

INTERPRETING THIS REPORT

The data in this report have been collected from two different sources: 'Forum Research Data' collected through computer assisted telephone and web interviews, and 'Open Link Data' promoted online and through the media by the City of Saskatoon. Since the methods used are different, these two sources cannot be combined. Subsequently, throughout this report, results from these data sources have been compared to each other and differences are indicated where available.

Due to rounding, numbers presented throughout this document may not add up to the totals provided. For example, in some cases, the sum of all question values may add up to 101% instead of 100%.

In the questionnaire, local, collector, and arterial streets have been defined as follows:

- **Local streets**, which make up the majority of streets in residential neighbourhoods. They usually have lower volumes of traffic, and their main function is for access to residences.
- **Collector streets**, which have higher volumes of traffic and provide access to schools, parks and community centres, and often have bus routes. Some examples include Richardson Road, Assiniboine Drive, Kingsmere Boulevard, and Stensrud Road.
- **Arterial streets**, which are typically along the boundary of residential neighbourhoods and connect to other neighbourhoods, have higher volumes of traffic, and sometimes have more than one travel lane in each direction. Some examples include segments of Diefenbaker Drive, Spadina Crescent, and Taylor Street.



Key Findings



KEY FINDINGS

Open link respondents are less in favour of speed limit reductions compared to Forum respondents

- Throughout this report, open link respondents tend to be less in favor of lowering speed limits and also more supportive of the removal of reduced speed limits compared to Forum respondents

Majority of Forum respondents and about a third of open link respondents are concerned about the speed of the vehicles in their neighborhoods

- In both datasets, those who are very concerned with the speed of vehicles in their neighborhoods are more likely to drive almost never or never than to drive daily, and more likely to walk/jog or bike daily than to almost never or never walk/jog or bike

Respondents prefer 30 km/h or 40km/h speed limits more for local streets compared to collector or arterial streets, though no change in speed limits on any streets is the most preferred

- Majority of open link respondents prefer no change in speed limits (i.e., keep at 50 km/h) on all types of streets
- About half of Forum respondents and a third of open link respondents prefer the speed limits to be lowered to 30km/h or 40km/h on local streets
- Of those who support a speed reduction on residential streets, 40km/h is the more preferred speed compared to 30km/h

Majority in both groups agree on the removal of the speed limits next to high schools and adding speed limits next to playgrounds

- Forum respondents are more in favour of lowering speed limits next to playgrounds and less in favour of removing speed limits next to high schools compared to open link respondents

Both Forum and open link respondents prefer no change in the times and days that school and playground zones are in effect

- Majority prefer 8:00 a.m. to 5:00 p.m., Monday to Friday, September through June (including holidays)

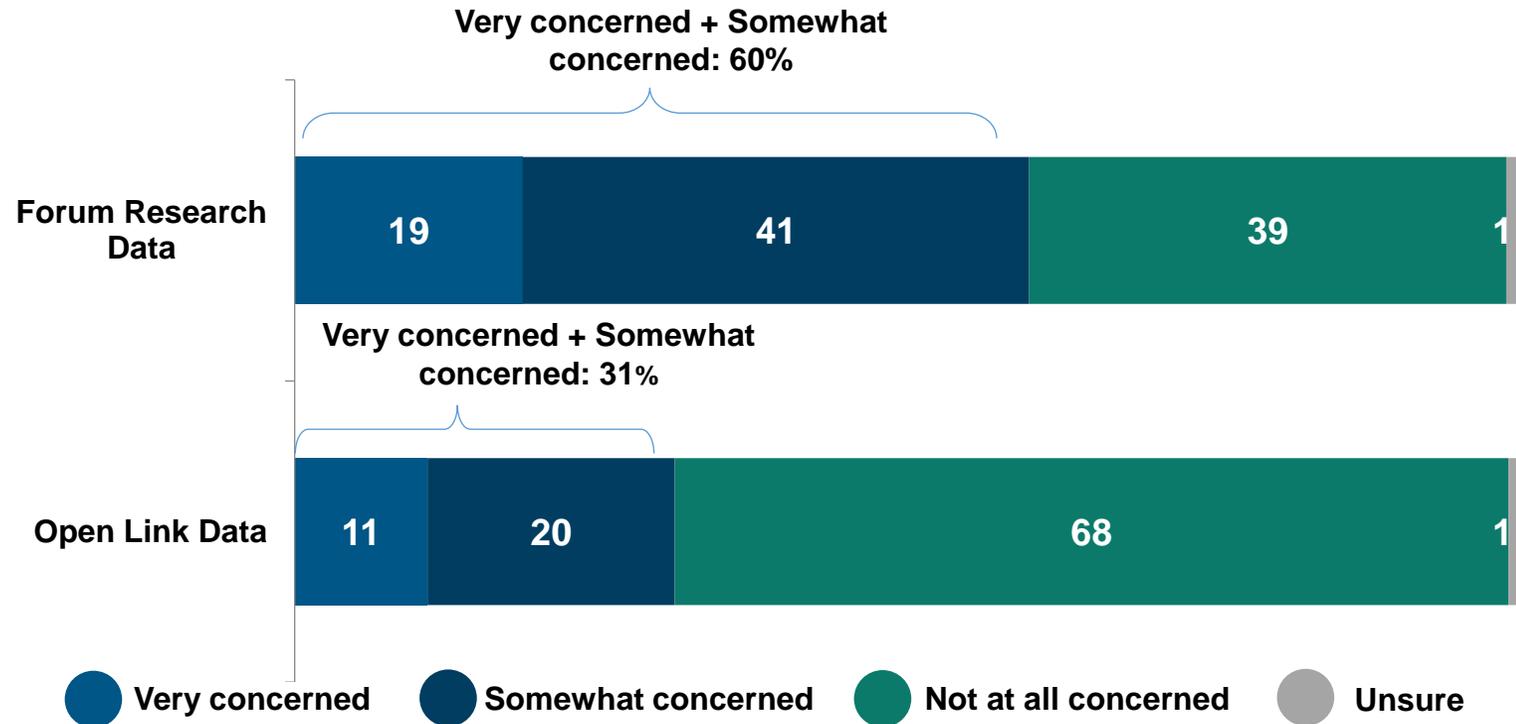


Detailed Findings



Concern with the Speed of Vehicles (%)

Forum respondents are substantially more concerned about the speed limits compared to open link respondents (60% vs. 31%)



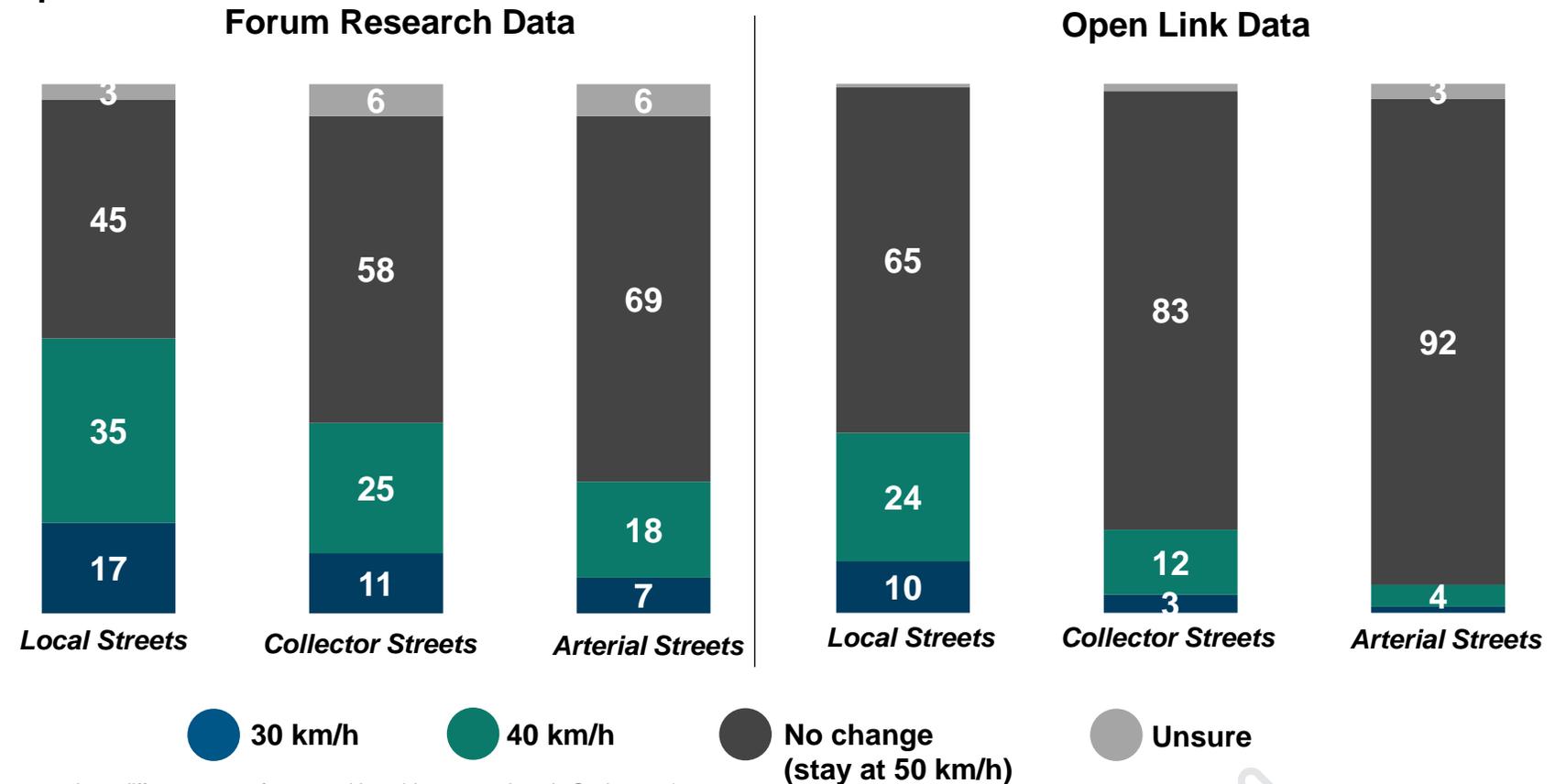
- While the majority of Forum respondents (60%) are concerned about the speed of vehicles in their neighbourhood, only 3 in 10 (31%) open link respondents are concerned
- Forum respondents who are most likely to say they are **very concerned** include those who:
 - drive almost never or never (23%)
 - walk/jog daily in winter (28%) and in warmer seasons (21%)
 - bike weekly in winter (41%) and monthly in warmer seasons (28%)
 - be aged 35-64 (24% to 29%) rather than the other age groups (10% to 16%)
- Open link respondents who are most likely to say they are **very concerned** include those who:
 - drive almost never or never (29%)
 - walk/jog daily in winter (16%), and in warmer seasons (13%)
 - bike daily in winter (28%) and in warmer seasons (17%)
 - be aged 35+ (12% to 13%) rather than 19-34 (7%)

Q1. How concerned are you with the speed of vehicles in your neighbourhood? Would you say you are...
 Sample size: 414 (Forum Research data) / 14,939 (Open Link Data)
 Sample framework: All respondents

Preferences on Speed Limits (%)

- Half of Forum respondents (52%) prefer a lower speed limit than 50 km/h on local streets
- 34% of open link respondents prefer a lower speed limit on local streets, whereas the majority (65%) prefer the limit to stay at 50km/h
- In both datasets
 - the majority do not prefer a change in speed limits for collector and arterial streets
 - those who prefer no change in the speed limits are more likely to drive daily than to drive less frequently
 - those who prefer the speed limits to be decreased to 30km/h-40km/h are more likely to walk/jog or bike daily than to walk/jog or bike less frequently

Respondents prefer 30 km/h or 40km/h speed limits more for local streets compared to collector or arterial streets, though no change in speed limits on any streets is the most preferred



Q2. There are three different types of streets with residences on them in Saskatoon:*
Which speed limit being considered would you prefer for each type of residential street?

Sample size: 414 (Forum Research data) / Local: 14,517, Collector: 14,475, Arterial: 14,449 (Open Link Data)

Sample framework: All respondents

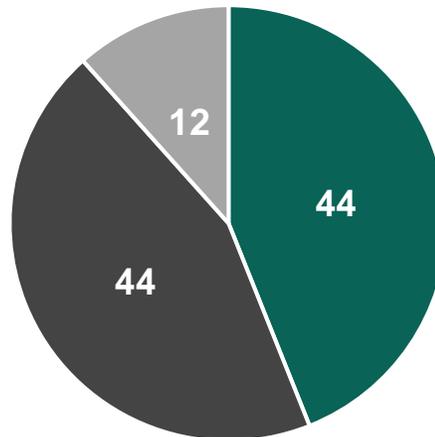
Opinions on Changes of Speed Limits (%)

Removal of school zone speed limits on arterial streets

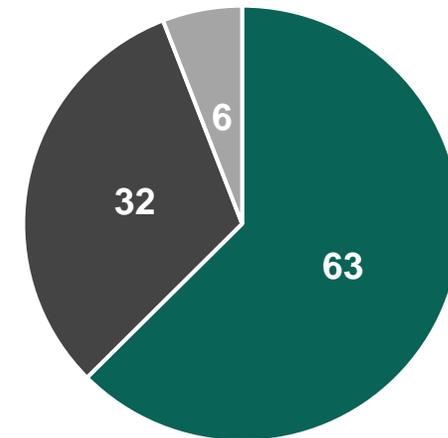
- 44% of Forum respondents are in favor of the removal of school zone limit of 30km/h on arterial streets, while another 44% do not support the removal
- Almost two thirds (63%) of open link respondents prefer the removal of the school zone speed limit on arterial streets
- In both datasets
 - those who support the removal are more likely to drive daily than to drive almost never or never
 - those who support the removal are less likely to walk/jog or bike daily than to almost never or never walk/jog or bike

There is an equal split between supporters and opponents for the removal of the school zone speed limits for Forum respondents, while the majority of open link respondents prefer the removal

Forum Research Data



Open Link Data



No

Yes

Unsure

Q3. The City is considering removing school zone speed limits of 30 km/h on arterial streets next to schools. Examples of arterial streets include school zones on Clarence Avenue, Lenore Drive, and 20th Street West. This is being considered because other safety measures can be used to control how students access the street, such as with fencing and controlled crosswalks, while still allowing traffic to flow smoothly. Would you support the removal of school zone speed limits on arterial streets?

Sample size: 414 (Forum Research data) / 14,235 (Open Link Data)

Sample framework: All respondents

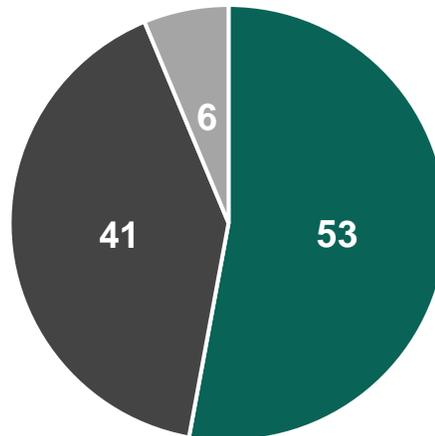
Opinions on Changes of Speed Limits (%)

Removal of school zone speed limits next to high schools

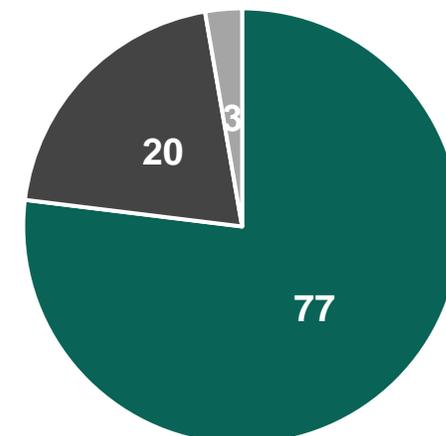
- In both datasets, those who support the removal are more likely to drive daily than to drive almost never or never
- Open link respondents who support the removal are less likely to walk/jog or bike daily than to almost never or never walk/jog or bike

Over half of Forum respondents (53%) and over three quarters of open link respondents (77%) support the removal of the speed limits next to high schools

Forum Research Data



Open Link Data



No

Yes

Unsure

Q4. The City is considering removing school zone speed limits of 30 km/h next to high schools. Older students are more aware of their surroundings and better able to assess when it's safe to cross the street. Would you support the removal of school zones next to high schools?

120

Sample size: 414 (Forum Research data) / 14,250 (Open Link Data)

Sample framework: All respondents

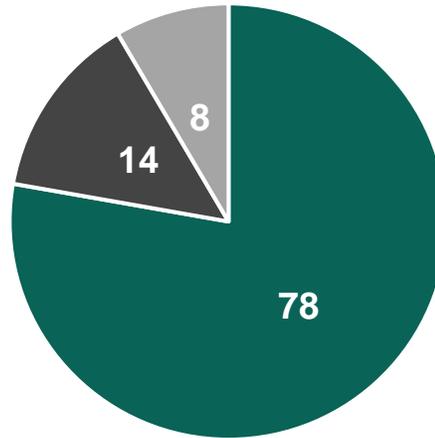
Opinions on Changes of Speed Limits (%)

Adding speed limits next to playgrounds

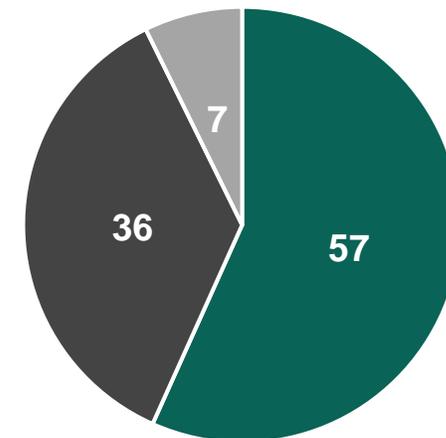
- Over three quarters of Forum respondents (78%) and over half of open link respondents (57%) support lower speed limits next to playgrounds
- Forum respondents who support the lowering of speed limits are more likely to drive daily and weekly compared to drive monthly or almost never or never drive (81% vs. 53% and 66%)
- Open link respondents who support the lowering of speed limits next to playgrounds are less likely to drive daily than to almost never or never drive (55% vs. 74%)

Majority of both Forum and open link respondents are in favor of lowering speed limits next to playgrounds

Forum Research Data



Open Link Data



No

Yes

Unsure

Q5. The City is considering adding playground zone speed limits next to parks that are directly beside the street, do not have fencing, and have play equipment structures for younger children. This is being considered because young children at play may not be paying close attention to their surroundings. In general, would you support lower speed limits next to playgrounds geared towards younger children?

Sample size: 414 (Forum Research data) / 14,245 (Open Link Data)

Sample framework: All respondents

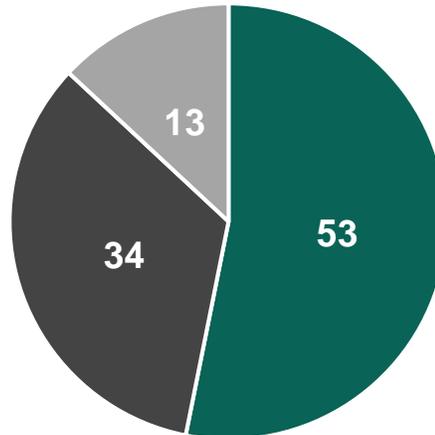
Opinions on Changes of Speed Limits (%)

Lowering speed limits where a high number of seniors live

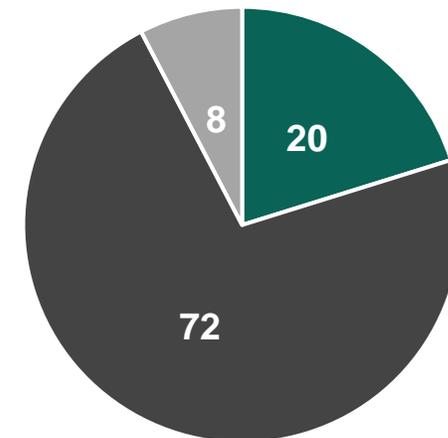
- Just over half of Forum respondents (53%) are in favor of lowering the speed limits in areas where a high number of seniors live
- However, almost three quarters of the open link respondents (72%) do not support a decrease in speed limits where seniors live
- In both datasets, those who support the lowering of the speed limits are less likely to drive daily than to drive almost never or never
- Forum respondents who support the lowering of the speed limits are more likely to walk/jog or bike daily than to almost never or never walk/jog or bike

Forum respondents are more likely to prefer lower speed limits where seniors live than open link respondents

Forum Research Data



Open Link Data



No

Yes

Unsure

Q7. The City is also reviewing speed limits in areas where a high number of seniors live, as some seniors may take longer to cross the street, may have slower reaction times, and may be more prone to injury. In general, would you support lower speed limits in areas where a high number of seniors live?

122

Sample size: 414 (Forum Research data) / 14,206 (Open Link Data)

Sample framework: All respondents

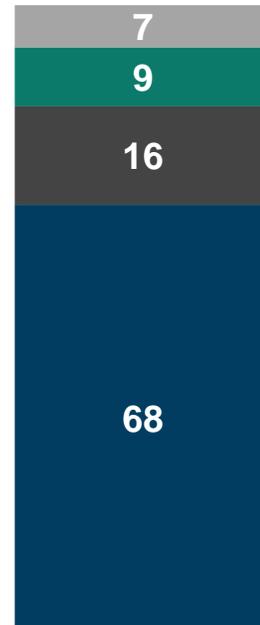
Preferences on times and days (%)

School and playground zones

- Almost 7 in 10 Forum respondents (68%) and 8 in 10 (80%) open link respondents would prefer the times and days that school and playground speed limit zones are in effect to remain the same
- Forum respondents are more in favour of extending speed limit zones from 8am-5pm to 8am-10pm compared to open link respondents (16% vs 9%)

In both groups, the majority prefer to keep the same times and days that school and playground speed limit zones are in effect as opposed to changing them

Forum Research Data



Open Link Data



- Unsure
- All day, every day of the year
- 8:00 a.m. to 10:00 p.m., every day of the year
- 8:00 a.m. to 5:00 p.m., Monday to Friday, September through June (including holidays)

Q6. The City is considering extending the times and days that school zones are in effect, which is currently from 8:00 a.m. to 5:00 p.m., Mondays to Fridays, September through June (including holidays). This is being considered because schoolyards can also be used by children in evenings, on weekends, and throughout the year. Any changes to times and days would also apply to playground zones if City Council were to approve them. Which option do you prefer for times and days that school and playground zones would be in effect?

Sample size: 414 (Forum Research data) / 14,213 (Open Link Data)

Sample framework: All respondents

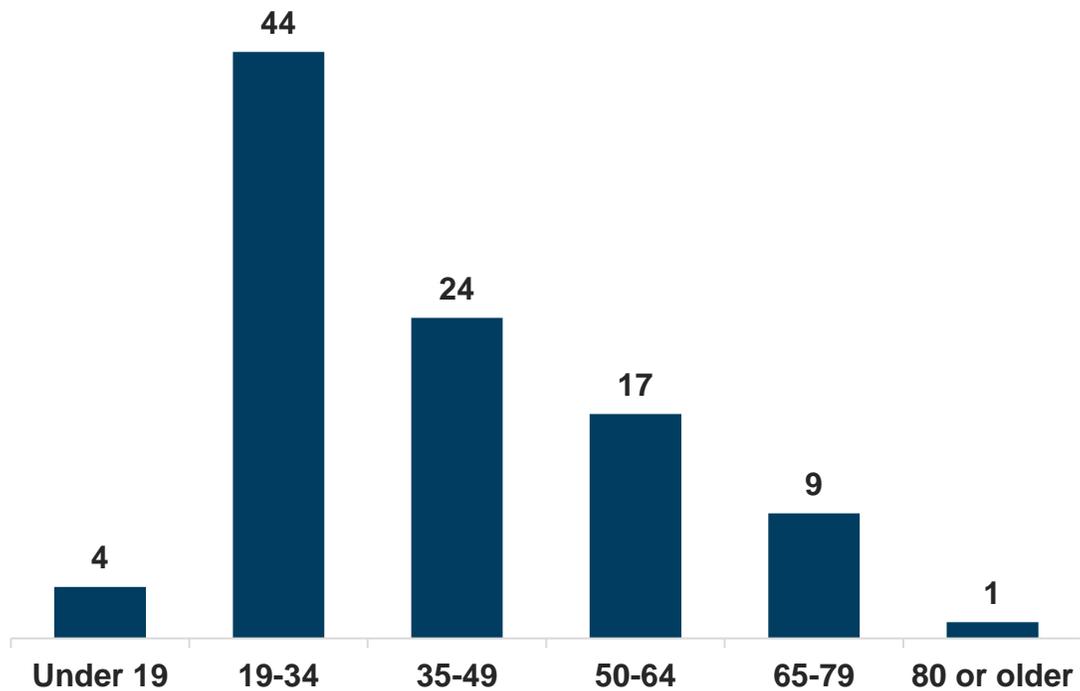


Respondent Profiles

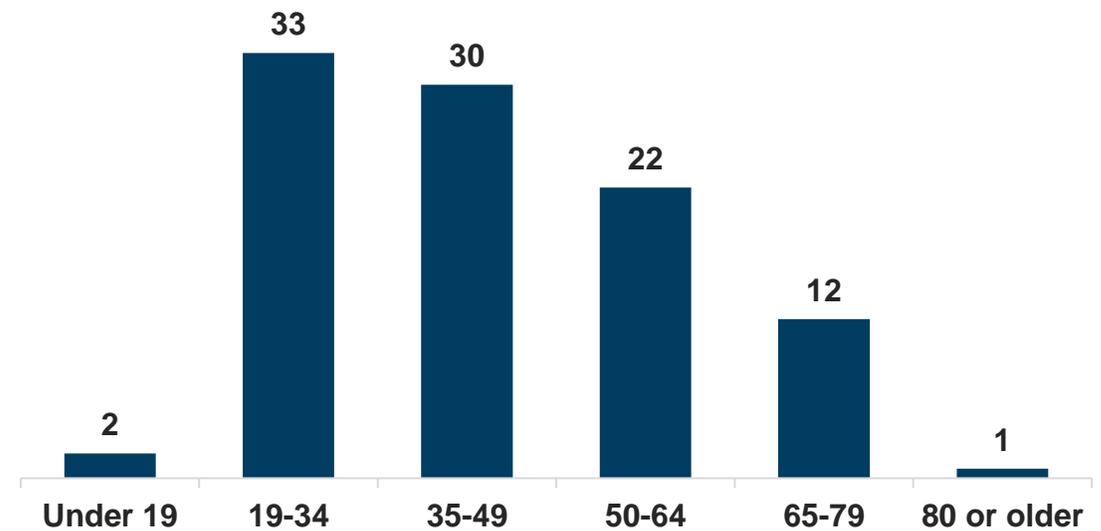


Age (%)

Forum Research Data



Open Link Data



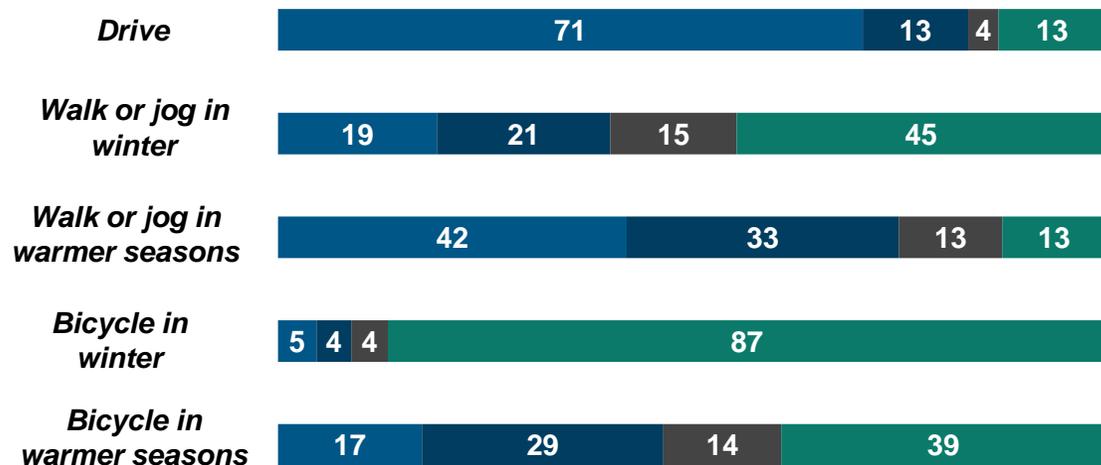
Q10. What is your age?

Sample size: 414 (Forum Research data) / 13,925 (Open Link Data)

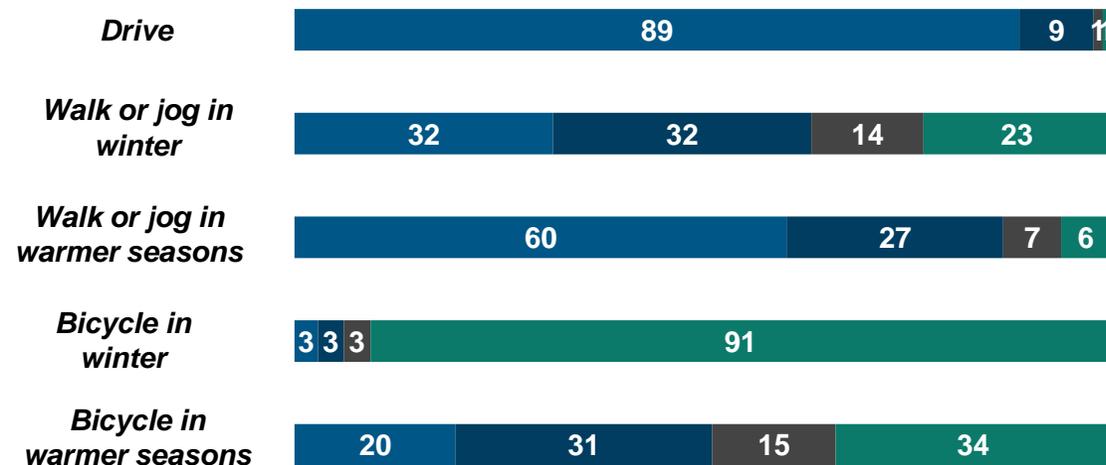
Sample framework: All respondents; excluding "prefer not to answer" responses

Frequency to drive, walk / jog or bicycle (%)

Forum Research Data



Open Link Data



● About daily
 ● About weekly
 ● About monthly
 ● Almost never or never

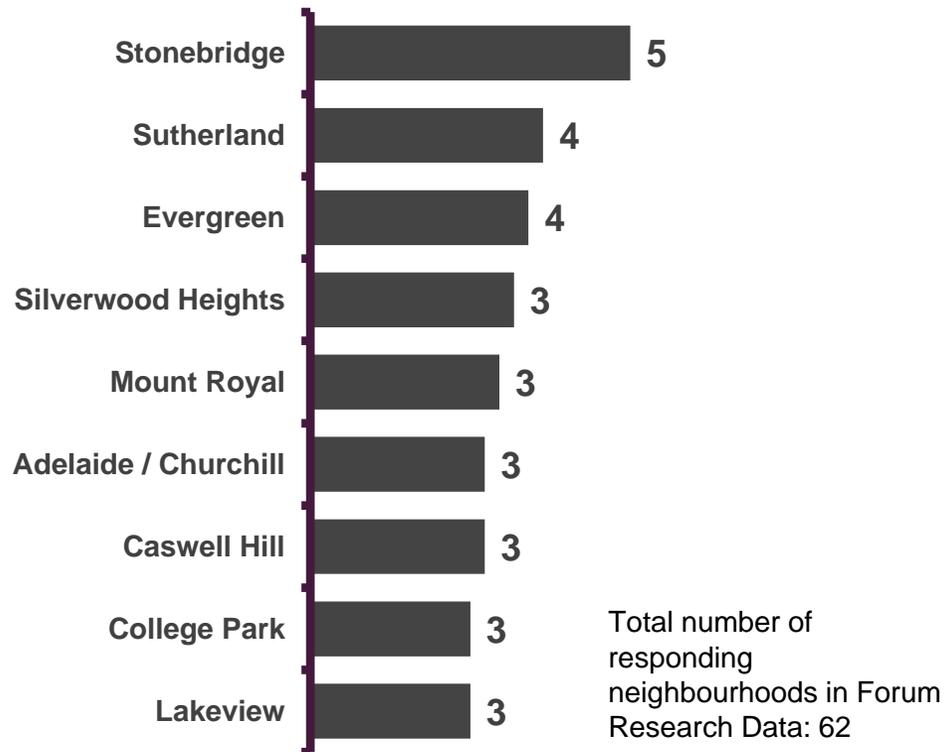
Q11. About how often do you do the following in a residential area in Saskatoon?

Sample size: 414 (Forum Research data) / Drive: 13,907, Walk/jog in winter: 13,810, Walk/jog in warmer seasons: 13,856, Bicycle in winter: 13,683, Bicycle in warmer seasons: 13,795 (Open Link Data)

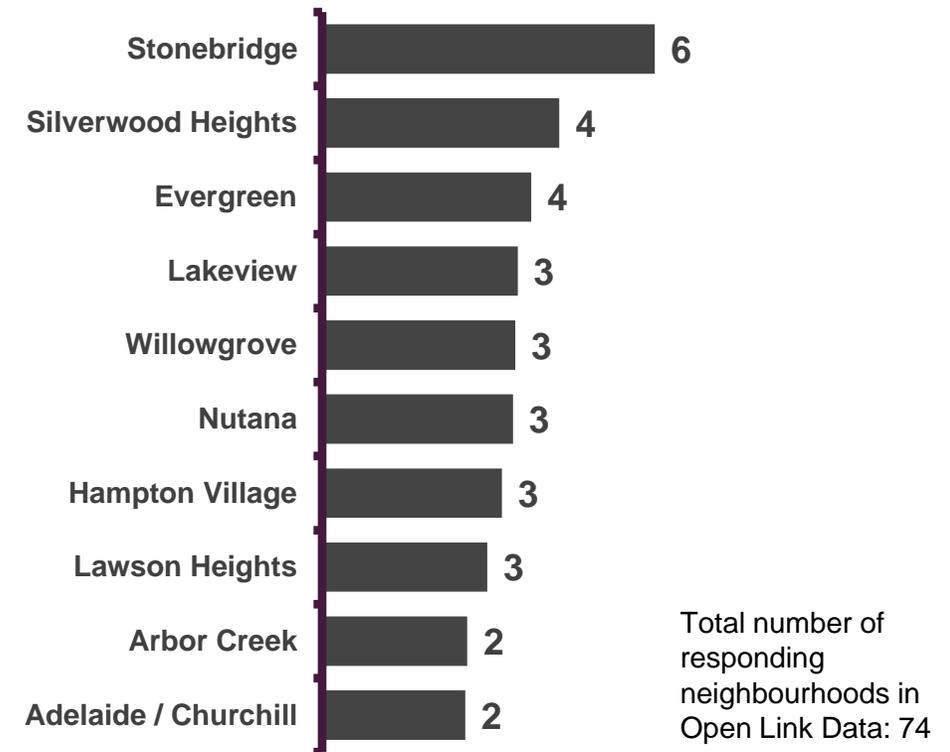
Sample framework: All respondents; excluding "prefer not to answer" responses

Top 10 Responding Neighbourhoods (%) *

Forum Research Data



Open Link Data



Q9. Which neighborhood do you live in?

Sample size: 414 (Forum Research data) 13,862 (Open Link Data)

Sample framework: All respondents; excluding "don't know" responses

*Only top 10 are shown

Speed Limit Review
Engagement Supplemental Information



Speed Limit Review

Engagement Supplemental Information
May 28, 2021



1 Background

This report provides additional information on the public engagement conducted for the Residential Speed Limit Review, including:

- Summary of comments received;
- Data cleaning of open link survey responses;
- Marketing summary; and
- Data limitations.

2 Summary of Comments Received

Respondents to the open link survey were able to provide a comment. These comments were analyzed to determine common themes. Below are the most common themes and sub-themes from these comments.

Administration also received 263 emails from the public. There was also a total of 84 comments on the City's project engage page (including City staff comments). The common themes from these other sources of input closely reflect the comments received in the survey.

Below is a summary of the most common themes and sub-themes received.

Does not support lower speed limits on residential streets

- Most were not in support of reviewing residential speed limits
- Doesn't think accidents on residential streets are an issue
- Waste of taxpayer money (i.e., the review, the cost of signage changes)
- Should not be a priority
- Will not fix speeding, distracted driving
- Argue that many accidents are caused by poor practices by pedestrians / cyclists rather than vehicle speed
- Negative impacts to reduced speed
 - Worse traffic flow
 - Frustration with lower speed
 - Too much attention on the speedometer rather than surroundings
 - Confusion / frustration with multiple speed limit changes
- Money grab through tickets
- Feel the change would not be adequately enforced

Frustration with the review process

- Survey questions and information provided by the City were biased towards reducing speeds
 - No option for increasing speeds
 - Limited options provided for school zone days/times
- City should have provided recent local collision data
- Review should have been initiated based on factual evidence, not perceptions of speed or input from interest groups
- Feel that City Council has already decided and public input will be ignored

Other options to consider

- Add traffic controls and calming measures where needed (e.g., seniors zones)
- Use fencing and other measures to direct pedestrians at parks and schools
- Enforce existing rules / hold offenders accountable
- Support addressing speed in neighbourhoods / spots where it's a proven issue rather than a City-wide blanket approach
- Education on traffic safety (drivers, cyclists, children)

Supportive of the review

- Those who indicated support for reductions on residential streets were more supportive of reductions on local streets compared to collectors or arterials
- There was more support for 40km/h as some feel 30km/h is excessively slow
- Safety considerations and concerns with vehicle speed were most often provided as the reason for supporting the review
- Speed limit reductions would not be widely supported in Saskatoon because of its "car culture"

Speed zones

- Support for school zones in general, even among many who are against considerations of speed reductions on residential streets
- Many support removal of speed zones next to high schools
- Not enough options were provided for times/days in the survey (e.g., options such as "only when children are present" or "other options for end times")
- Support for speed zones next to playgrounds, especially close to the roadway
- Many suggested traffic controls (e.g., flashing crosswalk signs) in areas with high numbers of seniors rather than speed reductions
- Some support school / playground zones year-round
- Traffic safety is also the responsibility of parents, teachers, and children

3 Data Cleaning – Open Link Survey

The City's open link survey allowed for multiple responses to be received from the same IP address. This setting was selected to ensure those who have limited or no access to their own device would still be able to participate in the survey at locations such as libraries, schools, or work places. This also enabled multiple respondents from the same household.

To mitigate the impact of any attempts at skewing the results by individuals who would fill out the survey multiple times, the results were sorted by IP address and reviewed if there were 10 or more responses from an IP address. In total, the responses from 52 IP addresses were reviewed using the following considerations:

- Were the responses submitted in quick succession beyond what one could expect from multiple users?
- Were there comments provided that repeated the same points using the same phrases / wording?
- Were the same options selected for each closed-ended opinion question?

If it was clearly evident using these considerations that the responses from an IP address with 10 or more responses were submitted by the same individual, all but the first response provided was omitted from the analysis. In cases where it was not clearly evident, all responses were included in the analysis.

In total, 731 responses from 35 different IP addresses were removed from the analysis. However, the difference in results for each question were negligible whether these responses were included in the analysis or not and, therefore, their removal had no impact on how the results were interpreted.

4 Marketing

To encourage a broad representation of Saskatoon residents, we used a variety of communications tools to promote the online survey to people digitally through social media and offline using printed inserts mailed with utility bills through April, posters at Leisure Centres and Saskatoon Public Libraries, and radio ads (2 weeks in mid March). The paid 6-week social media campaign reached beyond the City's followers across Facebook, Twitter and Instagram with 231,000 impressions.

The response was tremendous with an unprecedented participation of approximately 15,000 entries.

To ensure a balanced cross-section of residents were included in the public engagement, we hired a third-party firm to reach participants. The third-party firm offered both telephone and online as an option. They contacted a total of 1,234 participants and received 61 telephone responses and 353 online responses for a total of 414 responses.

Participants represented people from ages 18-84 from many different neighbourhoods who drive, walk, jog, and/or bike in all seasons.

5 Data Limitations

- Due to COVID-19, we were not able to conduct any in-person engagement. Online engagement is less inclusive as some residents may have limited to no Internet access. To mitigate this issue:
 - a third-party firm was hired to conduct the survey with a telephone option;
 - the survey allowed for multiple responses per IP address so the survey could be completed at public libraries, schools, work places, and other locations in which a person might have better access to the Internet;
 - the survey was promoted in a number of different ways other than digital promotions, including posters, utility bill inserts, and radio ads; and
 - the survey was open for responses for approximately two months.
- The question "Which speed limit being considered would you prefer for each type of residential street?" included the options 30km/h, 40km/h, 50km/h, and Unsure. However, some arterial streets with residential frontages currently have speed limits higher than 50km/h. Those responses received that prefer 50km/h will be interpreted as indicating "status quo" or "no change," which is supported by the comments received.

- Several comments received included “write-in” preferences for speed zone days/times for schools/playgrounds that were not included as options in the question.



April 12, 2021

Nathalie Baudais, P. Eng.
 Senior Transportation Engineer
 Transportation, Transportation and Construction Division
 City of Saskatoon
 222-23rd Avenue North
 Saskatoon, SK S7K 0J5

RE: Speed Limit Review of Residential Streets

Dear Nathalie:

The Saskatoon Council on Aging (SCOA) expresses appreciation for the invitation to be part of the Stakeholder meeting of March 25, 2021 chaired by Nathalie Baudais, Senior Transportation Engineer for the City of Saskatoon.

Data that was presented, highlighted the fact that crash rates of severity of collisions increase dramatically at higher speeds. This is due to the fact that higher speeds result in reduced field of vision and increased stopping distance, putting drivers as well as pedestrians and cyclists at seriously heightened risk of serious injury and death.

The engineering report offers the "Safe Systems Approach" to decision making regarding selected speed limits. It reflects that: "It is unethical to create a situation where fatalities are a likely outcome of a crash in order to reduce delay, fuel consumption or other societal objectives." Best outcomes i.e. 'people safety', are achieved from a combination of **safe roads, safe speeds, and safe vehicles.**

Saskatoon has seen 217 serious collisions related injuries in the last five years. These collisions resulted in 27 deaths.

"Expanding on these numbers:

- 85% of serious injuries, serious accidents and fatalities occurred at 50 km/h.
- 55% of serious injuries, serious accidents and fatalities occurred at 40 km/h.
- 10% of serious injuries, serious accidents and fatalities occurred at 30 km/h."

Statistics highlight the need for the current speed review, undertaken by the City of Saskatoon. Kudos to our City Fathers.

2020 COLLEGE DRIVE SASKATOON SK S7N 2W4

PH 306-652-2255 | FAX 306-652-7525

admin@scoa.ca | www.scoa.ca

Find us on Facebook – Saskatoon Council on Aging

Follow us on Twitter @scoa3



From looking at experiences of Seattle and New York, it is known, that reduction of speeds will result in actual reduction in collisions. Residents of Seattle currently want additional speed reductions to be introduced. Reflecting on the benefits of speed reduction elsewhere, we recognize that Saskatoon residents will benefit from reduced speeds decisions in our jurisdiction.

SCOA recommends that:

- 30 km/h be posted for *local streets, school zones and playgrounds.*
- speeds for *collector streets*, in residential areas, be set at 40km/h.
- *arterial street* speed be set at 50km/h in residential and industrial areas.

SCOA believes that implementation of the foregoing suggested speeds would be protective of people of all ages. Signage identifying 'Seniors Speed Zones' would be a source of aggravation to all concerned and would be absolutely opposed by SCOA.

Attendees of the Stakeholder meeting, were told, that neighborhood traffic reviews have been done in about 650 locations where residents have expressed concern. It is encouraging to note that data generated from such reviews reflect that drivers are generally governed by posted speeds. In spite of this, careful consideration of implementation strategies will be essential to consolidate broad community support and compliance. Beyond this, we recognize the ongoing need for enforcement to ensure that citizens respond appropriately to anticipated future speed reductions.

SCOA anticipates the likelihood that the Speed Limit Review will result in changes producing important benefits including:

- reductions in serious accident, injuries and deaths.
- reduced noise pollution.
- facilitating easier/safer to access to busy intersections, especially those where vision is obstructed by parked cars.

SCOA is grateful to have been invited to join in the City of Saskatoon Speed Limit Review and will continue to be available to participate in whatever additional forums are deemed useful.

Sincerely,



Paul Benson, Board Member
Saskatoon Council on Aging Inc.

2020 COLLEGE DRIVE SASKATOON SK S7N 2W4
PH 306-652-2255 | FAX 306-652-7525
admin@scoa.ca | www.scoa.ca

Find us on Facebook – Saskatoon Council on Aging
Follow us on Twitter @scoa3

Anticipated Schedule

