



**REVISED PUBLIC AGENDA
STANDING POLICY COMMITTEE
ON TRANSPORTATION**

Monday, November 4, 2019, 2:00 p.m.

Council Chamber, City Hall

Committee Members:

**Councillor Z. Jeffries, Chair, Councillor B. Dubois, Vice-Chair, Councillor C. Block,
Councillor R. Donauer, Councillor S. Gersher, His Worship Mayor C. Clark (Ex-Officio)**

Pages

1. CALL TO ORDER

2. CONFIRMATION OF AGENDA

Recommendation

1. That the following letters be added to Item 7.1.1:
 1. Requesting to Speak:
 1. Marjaleena Repo, dated October 30, 2019;
 2. Louis Mayrand, dated October 31, 2019;
 3. Peter Gallen, dated November 2, 2019;
2. That the letter from Terry Neefs, dated November 3, 2019, submitting comments, be added to Item 7.1.2;
3. That the letter from Brent Penner, Executive Director, Downtown Saskatoon, dated November 3, 2019, requesting to speak, be added to Item 7.1.4;
4. That the following letters be added to Item 7.1.9:
 1. Requesting to Speak:
 1. Brent Penner, Executive Director, Downtown Saskatoon, dated November 3, 2019;
 2. Submitting Comments:
 1. Randy Pshebylo, Executive Director, Riversdale Business Improvement District, dated November 4, 2019;
5. That the following letters be added to Item 7.2.1:
 1. Submitting Comments:
 1. Benjamin Ralston, dated November 1, 2019;
 2. Randy Pshebylo, Executive Director, Riversdale Business Improvement District, dated November 4, 2019;
6. That items with speakers be heard first following consideration of Unfinished Business; and
7. That the agenda be confirmed as amended.

3. DECLARATION OF CONFLICT OF INTEREST

4. ADOPTION OF MINUTES

7 - 12

Recommendation

That the minutes of regular meeting of the Standing Policy Committee on Transportation held on October 7, 2019 be adopted.

5. UNFINISHED BUSINESS

6. COMMUNICATIONS (requiring the direction of the Committee)

6.1 Delegated Authority Matters

6.1.1 Saskatoon Accessibility Advisory Committee (SAAC) - Request for Statistics [File No. CK 225-70] 13 - 13

Recommendation

1. That the Administration provide the Saskatoon Accessibility Advisory Committee with the current and future rehabilitation work plan locations related to the audible pedestrian signals and curb cuts; and
2. That the Transportation 2018 Annual Report be provided to the Saskatoon Accessibility Advisory Committee for information.

6.2 Matters Requiring Direction

6.3 Requests to Speak (new matters)

7. REPORTS FROM ADMINISTRATION

7.1 Information Reports

Recommendation

That the reports contained in Items 7.1.1 to 7.1.9 be received as information.

7.1.1 Transit Detour Process [File No. CK 7311-1] 14 - 23

The following letters are provided:

- Requesting to Speak
 - Robert Clipperton, Bus Riders of Saskatoon, dated September 4, 2019
 - Marjaleena Repo, dated October 30, 2019
 - Louis Mayrand, dated October 31, 2019
 - Peter Gallen, dated November 2, 2019
- Submitting Comments - Shirley Koob, dated October 14, 2019

7.1.2	Vehicle Noise Update [File No. CK 375-2]	24 - 37
	*Letter from Terry Neefs, submitting comments, has been added to this Item.	
7.1.3	Request for Approval of Accessibility Educational Event [File No. CK 225-70]	38 - 41
7.1.4	Snow Clearing of Adjoining Cycling Infrastructure and Sidewalks [File No. CK 6290-1]	42 - 46
	*Letter from Brent Penner, Executive Director, Downtown Saskatoon, requesting to speak, has been added to this Item.	
7.1.5	Whistle Cessation and Railway Crossing Projects [Files CK 375-2, x6171-1]	47 - 49
7.1.6	Inquiry – Councillor Z. Jeffries (August 26, 2019) Dust Issues – Beef Research Road [File No. CK 6315-1]	50 - 53
7.1.7	Chief Mistawasis Bridge Traffic Impact Assessment [File No. CK 6320-1]	54 - 82
7.1.8	2020/2021 Transportation Services Capital Budget Supplemental Information [Files CK 6320-1, x1702-1]	83 - 180
	Appendix 2 is provided electronically due to size.	
7.1.9	Overnight Parking Restrictions in Business Improvement Districts [Files CK 6120-1, x1680-1]	181 - 191
	*Requesting to Speak - Brent Penner, Executive Director, Downtown Saskatoon, dated November 3, 2019.	
	*Submitting Comments - Randy Pshebylo, Executive Director, Riversdale Business Improvement District, dated November 4, 2019.	

7.2 Approval Reports

7.2.1 Bicycle Bylaw Update - Proposed Revisions [Files CK 5300-5-2, x6000-5] 192 - 356

Appendix 1 is provided electronically due to size.

*Submitting Comments:

- Benjamin Ralston, dated November 1, 2019
- Randy Pshebylo, Executive Director, Riversdale Business Improvement District, dated November 4, 2019

Recommendation

That the Standing Policy Committee on Transportation recommend to City Council:

1. That Bylaw No. 6884, The Bicycle Bylaw be amended as based on the policy framework provided in this report; and
2. That the City Solicitor be requested to prepare the appropriate amendment to Bylaw No. 6884, The Bicycle Bylaw.

7.2.2 Request for Budget Adjustment - Capital Project #2266 - Highway 16 and 71st Street Intersection Upgrades [Files CK 1702-1, x6000-1]

357 - 359

Recommendation

That the Standing Policy Committee on Transportation recommend to City Council:

1. That \$224,000 of funding be returned to the reallocation pool from Capital Project #2405 – Idylwyld Drive and Circle Drive Interchange;
2. That \$260,000 of funding be returned to the Transportation Infrastructure Expansion Reserve from Capital Project #2428 – Functional Planning Studies; and
3. That the total of \$829,374.24 be allocated to Capital Project #2266 – Highway 16 and 71st Street Intersection Upgrades as follows:
 - a. \$44,374.24 from the Transportation Infrastructure Reserve;
 - b. \$455,000.00 from the Transportation Infrastructure Expansion Reserve;
 - c. \$106,000.00 from the Traffic Safety Reserve; and
 - d. \$224,000.00 from the Reallocation Funding Pool.

7.3 Decision Reports

8. URGENT BUSINESS
9. MOTIONS (Notice Previously Given)
10. GIVING NOTICE
11. IN CAMERA AGENDA ITEMS
12. ADJOURNMENT

PUBLIC MINUTES
STANDING POLICY COMMITTEE ON TRANSPORTATION

Monday, October 7, 2019, 2:00 p.m.
Council Chamber, City Hall

PRESENT: Councillor Z. Jeffries, Chair
Councillor C. Block
Councillor R. Donauer
Councillor S. Gersher
His Worship Mayor C. Clark (Ex-Officio), at 2:01 p.m.

ABSENT: Councillor B. Dubois, Vice-Chair

ALSO PRESENT: General Manager, Transportation & Construction T. Schmidt
Solicitor D. Kowalski
Deputy City Clerk S. Bryant
Committee Assistant J. Fast

1. CALL TO ORDER

The Chair called the meeting to order on Treaty 6 Territory and the Homeland of the Métis people.

2. CONFIRMATION OF AGENDA

Moved By: Councillor Block

That the agenda be confirmed as presented.

In Favour: (4): Councillor Jeffries, Councillor Block, Councillor Donauer, and Councillor Gersher

Absent (2): Councillor Dubois, and Mayor Clark

CARRIED UNANIMOUSLY

3. DECLARATION OF CONFLICT OF INTEREST

There were no declarations of conflict of interest.

4. ADOPTION OF MINUTES

Moved By: Councillor Gersher

That the minutes of regular meeting of the Standing Policy Committee on Transportation held on September 9, 2019 be adopted.

In Favour: (4): Councillor Jeffries, Councillor Block, Councillor Donauer, and Councillor Gersher

Absent (2): Councillor Dubois, and Mayor Clark

CARRIED UNANIMOUSLY

5. UNFINISHED BUSINESS

6. COMMUNICATIONS (requiring the direction of the Committee)

6.1 Delegated Authority Matters

6.2 Matters Requiring Direction

6.2.1 Mildred Kerr - Safe Transportation for Ill Disabled Riders of Special Needs Transport [File No. CK 7305-1]

A letter from Mildred Kerr dated September 10, 2019, along with the referenced attachment, was provided.

Mayor Clark entered the meeting at 2:01 p.m.

Moved By: Councillor Gersher

1. That the letter be referred to the Saskatoon Accessibility Advisory Committee for feedback; and
2. That the Administration engage with the Saskatchewan Health Authority as to how the transportation needs of ill-disabled riders following treatments can be better met and report back.

In Favour: (5): Councillor Jeffries, Councillor Block, Councillor Donauer, Councillor Gersher, and Mayor Clark

Absent (1): Councillor Dubois

CARRIED UNANIMOUSLY

6.3 Requests to Speak (new matters)

6.3.1 Shirley Koob - Posting Notices of Temporary Closures/Changes at Bus Stops [File No. CK 7311-1]

An email from Shirley Koob dated September 10, 2019 was provided.

It was noted that Ms. Koob was not present in the gallery. Councillor Block advised Ms. Koob has indicated that she will submit comments to the November meeting when the Administrative report with regard to the matter is before the Committee.

Moved By: Councillor Donauer

That the information be received and joined to the file.

In Favour: (4): Councillor Jeffries, Councillor Block, Councillor Donauer, and Councillor Gersher

Absent (1): Councillor Dubois

CARRIED UNANIMOUSLY

7. REPORTS FROM ADMINISTRATION

7.1 Information Reports

Moved By: Councillor Gersher

That the reports contained in Items 7.1.2, 7.1.3, 7.1.5 and 7.1.6 be received as information.

In Favour: (5): Councillor Jeffries, Councillor Block, Councillor Donauer, Councillor Gersher, and Mayor Clark

Absent (1): Councillor Dubois

CARRIED UNANIMOUSLY

7.1.1 Riversdale Neighbourhood Traffic Review - Follow-up [File No. CK 6320-1]

General Manager, Transportation & Construction Schmidt presented the report, and together with Senior Transportation Engineer Baudais responded to questions of the Committee.

Moved By: Councillor Donauer

That the report of the General Manager, Transportation & Construction dated October 7, 2019 be referred to City Council for information.

In Favour: (5): Councillor Jeffries, Councillor Block, Councillor Donauer, Councillor Gersher, and Mayor Clark

Absent (1): Councillor Dubois

CARRIED UNANIMOUSLY

7.1.2 2020 Neighbourhood Traffic Management Reviews [Files CK 6320-1 and TS 6320-1]

General Manager, Transportation & Construction Schmidt presented the report, and together with Senior Transportation Engineer Baudais responded to questions of the Committee.

7.1.3 Neighbourhood Traffic Management - Vertical Traffic Calming Devices Pilot Project - Follow-Up [Files CK 6320-1 and TS 6350-1]

General Manager, Transportation & Construction Schmidt presented the report, and together with Senior Transportation Engineer Baudais responded to questions of the Committee.

7.1.4 Saskatoon Freeway Project Update – October 2019 [File No. CK 6000-1]

Director of Transportation Magus provided a PowerPoint presentation, and answered questions of the Committee.

Mayor Clark excused himself temporarily from the meeting at 2:39 p.m.

Moved By: Councillor Donauer

That the report of the General Manager, Transportation & Construction dated October 7, 2019, along with the PowerPoint presentation, be referred to City Council for information.

In Favour: (4): Councillor Jeffries, Councillor Block, Councillor Donauer, and Councillor Gersher

Absent (2): Councillor Dubois, and Mayor Clark

CARRIED UNANIMOUSLY

7.1.5 Rectangular Rapid Flashing Beacon Pilot Project - Update [File No. CK 6150-3]

General Manager, Transportation & Construction Schmidt presented the report, and together with Senior Transportation Engineer Baudais responded to questions of the Committee.

7.1.6 Saskatchewan Government Insurance Cycling Safety Education Follow-up [Files CK 6000-5 and TS 0430-1]

General Manager, Transportation & Construction Schmidt presented the report, and together with Director of Transportation Magus responded to questions of the Committee.

Mayor Clark re-entered the meeting at 3:15 p.m.

7.2 Approval Reports

7.2.1 Street Network Planning Principles and Street Hierarchy [Files CK 6330-1 and TS 6330-1]

General Manager, Transportation & Construction Schmidt presented the report, and together with Director of Transportation Magus responded to questions of the Committee.

Moved By: Councillor Gersher

That the Standing Policy Committee on Transportation recommend to City Council:

That the use of the street classification system and street network plans, as outlined in the report of the General Manager, Transportation & Construction dated October 7, 2019, be approved.

In Favour: (5): Councillor Jeffries, Councillor Block, Councillor Donauer, Councillor Gersher, and Mayor Clark

Absent (1): Councillor Dubois

CARRIED UNANIMOUSLY

7.3 Decision Reports

8. URGENT BUSINESS

9. MOTIONS (Notice Previously Given)

10. GIVING NOTICE

11. IN CAMERA AGENDA ITEMS

12. ADJOURNMENT

The meeting adjourned at 3:33 p.m.

Councillor Z. Jeffries, Chair

S. Bryant, Deputy City Clerk

October 29, 2019

Secretary, Standing Policy Committee on Transportation

Dear Secretary:

**Re: Saskatoon Accessibility Advisory Committee (SAAC) – Request for
Statistics and Work Plan [File No. CK. 225-70]**

The Saskatoon Accessibility Advisory Committee, at its meeting held on October 11, 2019, reviewed their 2019 work plan and the progress that has been made. It was noted that the Advisory Committee was not in receipt of statistics on the status of the audible pedestrian signals and curb cuts since 2017. The Advisory Committee determined that it would be beneficial to have these stats as they are related to carrying out further action on their work plan and providing advice to City Council. The Committee resolved:

1. That a letter be forwarded to the Standing Policy Committee on Transportation, requesting that the Administration provide the Saskatoon Accessibility Advisory Committee with the current and future rehabilitation work plan locations related to the audible pedestrian signals and curb cuts; and
2. That the Transportation 2018 Annual Report be provided to the Saskatoon Accessibility Advisory Committee for information.

The Saskatoon Accessibility Advisory Committee respectfully requests that the recommendation be considered by the Standing Policy Committee on the Transportation.

Yours truly,

**JD McNabb, Chair**
Saskatoon Accessibility Advisory Committee

JM:ht

cc: General Manager, Transportation and Construction Department
Director, Transportation, Transportation and Construction Department

Transit Detour Process

ISSUE

Saskatoon Transit uses a primarily paper-based system for communicating temporary transit stop closures and is anticipating moving to a primarily digital approach by April 1, 2020. This report provides the Standing Policy Committee on Transportation with background, status and process information on this transition.

BACKGROUND

Saskatoon Transit Administration has identified many gaps within the current process of posting paper notices for temporary bus stop closures. The use of paper bus stop closure notifications is susceptible to a number of issues which impacts the timeliness and accuracy of information available. For example, weather, vandalism and theft all impact the reliability of the paper notification. Furthermore, changes to a construction project impacting a bus stop also affects the reliability and timeliness of the information depending on when Transit staff receives the information and can re-visit the location to update the paper notice. Posting, updating and monitoring the status of these paper notices requires time equivalent to approximately 1.5 FTEs, roughly \$100,000 annually.

CURRENT STATUS

The vast majority of temporary bus stop closures take place during the City's construction season (April – October).

Saskatoon Transit currently communicates temporary bus stop closures by:

- Posting a paper notice at affected bus stops for planned detours or closures in excess of 24 hours in duration.
- Posting a digital notification, called a Service Alert on the mobile app Transit, Google Transit (available on mobile and desktop), SaskatoonTransit.ca and Saskatoon Transit Twitter.

Over 6,000 Saskatoon Transit riders use the Transit app on a daily basis. This does not include the number of people who use Google maps on their phone or desktop and the approximately 1,000 people who visit Saskatoon Transit's website every day. In addition to receiving Service Alert information, those riders using the Transit app can mark the routes they use on a regular basis as their favourite, within the app, to receive push notifications when there is a service alert on their route.

To post a paper notification, Transit Supervisors drive to the affected bus stop and post a notification. These notices are temporarily affixed to the bus stop pole using zip ties and it is important that they are monitored for vandalism, theft and damage as they are often damaged or displaced by adverse weather. When there is a change to a project/bus stop closure timeline, staff must go back to the affected stop and post new paper notices. This process can result in significant delays for riders to access updated information.

Saskatoon Transit always aims to set up a detour without closing a bus stop, when possible, bus stops are closed only as a last resort. When a closure is necessary, there are typically barricades or pylons blocking the road which offer a visual cue that vehicles, including buses, are not allowed to drive down a street. Posting paper notifications on temporarily closed bus stops could encourage people to walk into construction zones to read them, posing a safety concern for both the individual and workers.

Advances in software and hardware used to monitor and track the GPS locations of buses has allowed Saskatoon Transit to automate service alerts across all digital channels. This automation allows Service Alerts to be pushed to affected routes at the same time as Saskatoon Transit is notified of the service disruption. This provides for immediate alterations to an alert when needed.

DISCUSSION/ANALYSIS

Saskatoon Transit's transition to digital first temporary bus stop closure notifications relies on a method whereby service alerts are pushed to the Transit App, Google Transit, SaskatoonTransit.ca and Saskatoon Transit Twitter. Paper notices outlining all service disruptions for planned detours in excess of 24 hours will be posted at each of the six main Transit Terminals (Downtown, Place Riel, Market Mall, Centre Mall, Confederation Mall and Lawson Mall), catering to those transferring at a terminal who may not be on a digital platform. In all cases, contacting staff at the Saskatoon Transit Customer Service Centre, 975-3100, will result in citizens getting up to date information. This will see paper notifications no longer posted at each affected stop beginning with the 2020 construction season.

The one exception is when a bus stop is closed and routing is changed from one street to another. In this instance, paper notifications will be used to direct riders to temporary bus stops (depicted by A frame signs) in the new locations.

As noted earlier, there are many gaps in the current process of posting paper notifications. Saskatoon Transit's commitment is to provide timely and reliable service to customers yet the reality is that the paper notifications can often lead to unreliable information. The current system requires significant staff hours at a cost of approximately \$100,000 per year that could be invested in other areas to enhance customer and employee support.

Furthermore, the current process will not be sustainable as the footprint of the city grows, relying on more staff hours to post, monitor and take care of notices across a larger system. The digital first approach greatly assists Saskatoon Transit in building trust with riders by communicating timelier, more consistent and reliable information on an increasingly convenient platform that up to 96% of the population use. (According to the Pew Research Centre, 96 percent of Americans own a mobile phone with high penetration among all demographic groups.)

By committing to digital service alerts and paper notifications at Transit terminals, Saskatoon Transit can instantly inform the large majority of riders while maintaining a notification system for non-wired users. Moving forward, temporary bus stop closure notifications will be communicated as follows:

Channel	Form
Transit app	Digital (mobile)
Google Transit	Digital (mobile & desktop)
SaskatoonTransit.ca	Digital (mobile & desktop)
Transit Twitter	Digital (mobile & desktop)
Six Transit Terminals	Hard Copy
Calling Transit Customer Service (975-3100)	Other (mobile & landline)

The digital first approach supports the strategic goal of Continuous Improvement by looking at more efficient ways to conduct business and ensure an integrated approach to stakeholder communications. One of the pillars of the Communications and Public Engagement Division is to enhance the digital approach. Exponential growth in technology has brought about increased citizen expectations, with residents wanting access to timely and digitally accessible information they can access on their own time and on their own devices. Moving to a digital approach for advising customers of temporary bus stop closures aligns with the digital approach the City has undertaken for notifying residents of garbage collection schedules, and leisure guide programs and services.

In Canada, the majority of mobile phone users are smartphone users. Further, regardless of assumptions to the contrary, data is not required to access Transit Service Alert information on the Transit app, removing a barrier for many individuals. For clarification, it is by using the “Go” feature in the Transit app that data is required, as well as the function that enables riders to see how far away the bus is in real time.

Transit Agencies from around Canada

Saskatoon Transit enlisted the Canadian Urban Transit Association (CUTA) to poll Canadian transit agencies on temporary bus stop notification processes. Of the 31 respondents, 24 agencies have some form of digital notification approach, three agencies did not post physical notifications at bus stops and several agencies expressed they would be expanding their digital notifications process. From this quick industry scan, it appears that Saskatoon Transit is at the leading edge of adopting a digital first approach and technology integration.

Digital Approach Services from North American Agencies

Saskatoon Transit also found other examples of government agencies successfully moving to a digital first approach in non-traditional industries. In the United States numerous public service agencies use a digital approach to enroll in a program, set up a free doctor appointment, and communicate with and notify customers of program changes.

Saskatoon Transit is examining the current digital systems available, and is in discussions with existing vendors to see whether there are options to incorporate text messaging, and RSS feeds into the temporary bus stop closure notification process.

IMPLICATIONS

An estimated 1.5 FTEs (equivalent to approximately \$100,000) are used to print, physically distribute, update and monitor all the paper notifications. These resources will be used to further enhance the customer experience and provide more day-to-day support to Transit staff including mentoring and coaching of operators as well as timelier customer complaint and issue follow-up.

This change in process will also reduce the amount of paper and single use plastics (zip ties) used by Saskatoon Transit. Completing the adoption of a digital first approach for temporary bus stop closure notifications in the spring of 2020 allows for appropriate time to communicate with residents and seek feedback on the options presented within this report.

Based on a statistical analysis of daily ridership, average number of bus stops closed to construction, total number of bus stops, and percentage of citizens without access to a mobile device, there is a 0.017% to 0.034% probability that an individual citizen may be affected by a bus stop closure during construction season.

NEXT STEPS

Saskatoon Transit anticipates completing the adoption of a digital first approach for bus stop notifications at the start of the 2020 construction season (April 1, 2020). Prior to this, further options for providing notifications will be explored and additional stakeholder discussions will be conducted.

Report Approval

Written by:	Michael Moellenbeck, Operations Manager Allison Gray, Marketing Consultant Cory Shrigley, Customer Service and Engagement Manager
Reviewed by:	Carla Blumers, Director of Communications & Public Engagement, Strategy & Transformation James McDonald, Director Saskatoon Transit
Approved by:	Terry Schmidt, General Manager, Transportation and Construction Department

From: Robert Clipperton <[REDACTED]>
Sent: Wednesday, September 04, 2019 3:51 PM
To: Web E-mail - City Clerks
Subject: Standing Policy Committee on Transportation



Greetings:

We would like to address the SPCOT at their meeting on September 9th. The topic we would like to address is Transit's new practice of eliminating paper signage to indicate closed bus stops.

Thank you for consideration of this request.

Robert Clipperton, Steering Committee
Bus Riders of Saskatoon
306-[REDACTED]

From: Marjaleena Repo <[REDACTED]>
Sent: Wednesday, October 30, 2019 3:34 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Wednesday, October 30, 2019 - 15:34

Submitted by anonymous user: 207.47.175.129

Submitted values are:

Date Wednesday, October 30, 2019

To His Worship the Mayor and Members of City Council

First Name Marjaleena

Last Name Repo

Email [REDACTED]

Address [REDACTED] Elm Street

City Saskatoon

Province Saskatchewan

Postal Code S7[REDACTED]

Name of the organization or agency you are representing (if applicable)

Subject notification re temporary change in bus routes

Meeting (if known) Transportation committee, November 4th

Comments

I would like to make a presentation to the transportation committee on the above subject on November 4th.

Attachments

The results of this submission may be viewed at:

<https://www.saskatoon.ca/node/398/submission/346797>



[REDACTED] – 19th Street East
Saskatoon SK S7K [REDACTED]
October 31, 2019

Attention: City Clerks

I would like to speak to the Standing Policy Committee on
Transportation at their meeting on Monday, November 4th
regarding agenda item 7.1.1 Transit Detour Process.

Thank you,

Louis Mayrand

Louis Mayrand
(306) [REDACTED]

From: Peter Gallen <[REDACTED]>
Sent: Saturday, November 02, 2019 11:34 AM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Saturday, November 2, 2019 - 11:34

Submitted by anonymous user: 71.17.188.27

Submitted values are:

Date Saturday, November 02, 2019

To His Worship the Mayor and Members of City Council

First Name Peter

Last Name Gallen

Email [REDACTED]

Address [REDACTED] Haight Crescent

City Saskatoon

Province Saskatchewan

Postal Code S7H [REDACTED]

Name of the organization or agency you are representing (if applicable)

Subject Agenda item 7.1.1 Transit Detour Process

Meeting (if known) SPC on Transportation

Comments

I respectfully request the opportunity to speak to agenda item 7.1.1 'Transit Detour Process' at the SPC on Transportation meeting on Monday, November 4, 2019. Thank you for your consideration.

Attachments

The results of this submission may be viewed at:

<https://www.saskatoon.ca/node/398/submission/347305>

From: Shirley Koob <[REDACTED]>
Sent: Monday, October 14, 2019 8:31 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Monday, October 14, 2019 - 20:30

Submitted by anonymous user: 207.47.175.54

Submitted values are:

Date Monday, October 14, 2019

To His Worship the Mayor and Members of City Council

First Name Shirley

Last Name Koob

Email [REDACTED]

Address [REDACTED]-12th Street East

City Saskatoon

Province Saskatchewan

Postal Code S7N [REDACTED]

Name of the organization or agency you are representing (if applicable)

Subject Posting Notices of Temporary Closures/Changes at Bus Stops

Meeting (if known) SPC on Transportation November 2019

Comments

I will be out of country for the November 2019 meeting so will be unable to speak, but would appreciate having my comments go to all councillors prior to the meeting so they can read my comments. Thank you.

I am writing today with serious concerns I have about Saskatoon Transit.

1) Saskatoon Transit used to post notices at bus stops (when bus stops were temporarily out of use (e.g. during the Fringe, some Broadway Bus stops were closed). The notices used to tell us which bus stop to go to, but now they just say something like "Stop Not in Use", leaving the bus rider to figure out on their own where to find another bus stop.

However, the MUCH BIGGER PROBLEM is that I was told that as of September 30th, Saskatoon Transit will no longer be posting any notice at all to tell the rider that a stop is temporarily out of service. The rider will now stand at a bus stop, assuming their bus is coming and if the bus doesn't come the rider is then out of luck, left to wonder what happened to their bus! This is the most ridiculous idea! Apparently riders are now supposed to be psychic to know whether or not a bus is coming to their stop!! Then if a bus doesn't come to the stop (meaning the rider is late for work, appointments, or anything else they were going to), apparently riders are supposed to look at their app on their cell phone to find out what happened to their missing bus. I don't own a cell phone. Many people who ride the bus do not own cell phones and not everyone with a cell phone has the Saskatoon Transit app. So, many people are going to be left behind, not knowing what is going on!

The City of Saskatoon needs to increase ridership on Saskatoon Transit. The environment also needs more people to take the bus. These types of decisions only decrease ridership! Imagine yourself standing at a bus stop in 40 below weather, not knowing if a bus is coming or not and with no way to find out. Now, think about that

same situation as a senior, or someone with mobility issues. Now think about the same situation, with a fear of losing your job if you are late for work. (Imagine that you are on your way to a City Council meeting and the bus just doesn't show up at your stop and you are late for the meeting and if you are late for the meeting, you are fired from your councillor position). There are no good reasons for leaving those of us who use and rely on Saskatoon Transit to with LESS information about the bus. Those that use the bus need MORE information, not less! When the bus system doesn't work, people give up on the bus!

2) There was a new Aboriginal design bus shelter installed at 12th Street East and Broadway this summer. Although the Aboriginal design is nice, the shelter doesn't function properly. As one is standing in the shelter, looking east to watch for your bus, one can't see out of the shelter to actually see if there is a bus coming. So one has to stand outside of the shelter to watch for a bus. Also, if one was standing in the bus shelter, a bus driver would not be able to see if you were in the shelter and would drive on past. There needs to be clear panes on the side(s) where one is watching for a bus!. This particular bus shelter now does not function as a shelter because one has to stand outside of it to watch for their bus!

Please contact me ASAP about these serious issues.

Thank you.

Shirley Koob

Attachments

The results of this submission may be viewed at:

<https://www.saskatoon.ca/node/398/submission/344298>

Vehicle Noise Update

ISSUE

The Administration received responses from Saskatchewan Government Insurance (SGI) and Board of Police Commissioners regarding traffic noise due to vehicle mufflers.

BACKGROUND

City Council, at its meeting held on June 25 and 26, 2018, considered a report regarding traffic concerns on Spadina Crescent from 33rd Street to University Bridge and resolved, in part:

- “2. That a letter be written to SGI and Board of Police Commissioners to work together to revisit the application of amendments to include a decibel limit for all vehicles in general.”

The Standing Policy Committee on Transportation, at its meeting held on August 6, 2019, considered a letter from Terry Neefs regarding his concerns with anti-social driving and noise pollution and resolved:

- “That the Administration attach the letter from Mr. Terry Neefs, dated June 10, 2019 to the upcoming report regarding the City's request that SGI and the Board of Police Commissioners work together to revisit the application of amendment to include a decibel level for all vehicles in general.”

CURRENT STATUS

The Administration sent letters to SGI and Board of Police Commissioners requesting that they work together to revisit the application of amendments with regards to the enforcement of traffic noise. Highlights from SGI's response (Appendix 1) are as follows:

- SGI spoke with the Saskatoon Police Service and the Crown Traffic Prosecutor regarding traffic noise enforcement, and convictions have been realized, and concluded enforcement is occurring.
- The number of tickets issued each year varies, which does not indicate a drop in enforcement, but perhaps more warnings would have occurred.
- Most jurisdictions have similar Regulations to Saskatchewan, and all rely on subjective enforcement.
- SGI notes that after market mufflers are not marked, rated, or have any markings, resulting in subjective enforcement still being required.

Highlights from the Board of Police Commissioner's response (Appendix 2) are as follows:

- The number of cars with modified muffler systems has increased in recent years.
- Some city events, such as Cruise Night, provide opportunity for increased traffic noise.

- Legislation to address vehicle noise is provided in the *Traffic Safety Act*, the *Vehicle Equipment Act*, and the Saskatoon Noise Bylaw. The *Traffic Safety Act* outlines a very subjective charge. The *Vehicle Equipment Act* and Saskatoon Noise Bylaw are more objective and require officers to have a minimal amount of mechanical knowledge, specialized equipment, and training.
- Enforcement has occurred over the past five years.
- 41% of all traffic noise violations are issued on 8th Street.
- The Saskatoon Police Service Traffic Unit completed a multi-faceted educational campaign this past June which included:
 - social media messaging (hash tag #KeepItDown);
 - voluntary testing clinics were set up for motorcyclists at various locations;
 - noise checkpoints were completed with very few surpassing the upper noise threshold limits; and
 - Traffic Unit representatives spoke with local media outlets to inform the public of the issue.
- Concurrently with the educational campaign, Traffic Unit members received training and information about traffic noise.
- Consultation with SGI occurred regarding repeat offenders who would not remove the offending equipment despite receiving subsequent tickets. SGI agreed to provide compliance letters to the offenders and provide thirty days to fix the issue, or face registration cancellation.
- Discussion on mitigation measures is provided.

The letter from Terry Neefs is included in Appendix 3.

IMPLICATIONS

Financial, legal, social, or environmental implications were not reviewed.

APPENDICES

1. Email from SGI, dated February 5, 2019
2. Letter - The Board of Police Commissioners, dated September 23, 2019
3. Letter - Terry Neefs, dated June 10, 2019

Report Approval

Written by: Nathalie Baudais, Senior Transportation Engineer
Reviewed by: David LeBoutillier, Engineering Manager, Transportation
Jay Magus, Director of Transportation
Approved by: Terry Schmidt, General Manager, Transportation & Construction Department

Admin Report - Vehicle Noise Update.docx

Budais, Nathalie

From: Ron Foord <[REDACTED]>
Sent: Tuesday, February 05, 2019 3:43 PM
To: Budais, Nathalie
Cc: Michael Kline
Subject: Traffic Noise

Hi Nathalie:

I received your letter regarding traffic noise. There is a fair bit of history behind this issue. In the past I have been in contacted with the City regarding traffic noise., so please give me a call to discuss the background. My direct number is [REDACTED]. Below is some of the information I obtain over the last couple of years.

I spoke with Brian Shalovelo from the Saskatoon City Police, and the Crown Traffic Prosecutor regarding traffic noise enforcement. I was able to obtain the number of conviction for the city of Saskatoon from our system. (see below) The Crown Prosecutor advised he is successful in prosecuting charges. Based on the number of conviction listed below and Saskatoon police service's web site, it appears there is enforcement of the regulations.

<https://globalnews.ca/news/1510805/saskatoon-police-helping-motorcyclists-adhere-to-noise-bylaw/>

[https://saskatoonpolice.ca/pdf/brochures/Noise Bylaw Brochure 5-5x8-5 WEB FINAL.pdf](https://saskatoonpolice.ca/pdf/brochures/Noise%20Bylaw%20Brochure%205-5x8-5%20WEB%20FINAL.pdf)

As you can see the number of tickets are not consistent over the years. This does not necessarily mean the level of enforcement has dropped, police have a few options when enforcing excessive noise violations. They may have chosen other methods, for example, more warnings, withdraw the ticket if the person shows the officer they complied or installed a new muffler. These actions would not be counted in the number of tickets issued.

After reviewing the excessive noise issue what I have found is most jurisdiction have very similar Regulations to Saskatchewan. Moreover, they rely on subjective enforcement. Quebec regulations are very specific : " No component of the system shall have been replaced, removed, added or modified in a way that makes the system noisier or more likely to cause burns compared to the system installed by the motorcycle manufacturer. The exhaust system shall not have a mechanism that prevents exhaust gases from flowing through the muffler." But they still rely on subjective enforcement.

My understanding is after market mufflers are not marked, rated or have marking identifying for which vehicle the muffler was designed. So in the end, a subjective enforcement decision is still required. Also their regulation appears only to address motorcycles and most Provinces and States have chosen not to have a specific excessive noise regulation just for motorcycles.

Having said that, some municipalities, like Edmonton, do have excessive noise bylaws with a SAE approved test which they enforce. Also it's my understanding the City of Saskatoon has a similar bylaw.

The Saskatoon City police website shows enforcement of this similar bylaw.

<http://saskatoonpolice.ca/traffic/>

Base on the above it seems that the City has a good understanding of the issue and the ability to enforce the current regulations.

Below are number of excessive noise convictions SGI has a record of per year in Saskatoon:

2010 - 11

2011 - 6

2012 - 33

2013 - 38

2014 - 19

2015 - 11

2016 - 10

As mentioned above please give me a call so we can discuss further.

Ron

SGI (Corporate Head Office) • 2260 11th Avenue • Regina, SK • S4P0J9 • www.sgi.sk.ca • 1-844-TLK-2SGI (1-844-855-2744)

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THE BOARD OF POLICE COMMISSIONERS

SASKATOON, SASKATCHEWAN



September 23, 2019

Ms. Nathalie Baudais
Senior Transportation Engineer, Transportation Division
Transportation & Construction Department, City of Saskatoon

Dear Ms. Baudais:

Re: Traffic Noise Due to Vehicle Mufflers

Thank you for your correspondence of January 22, 2019, regarding the referenced matter.

The Saskatoon Board of Police Commissioners referred this matter to the Chief of Police for follow-up and report. In this regard, the Board considered the attached report of the Saskatoon Police Service dated September 9, 2019, at its meeting held on September 19, 2019. The Board resolved:

1. That the information be received;
2. That the Board of Police Commissioners write a letter to the Province regarding a review of the current level of fines; and
3. That in response to the communication from the City's Transportation Division, the report of the Saskatoon Police Service be shared, including commentary that when the issue of the Noise Bylaw is reviewed, the City consider a public education program that reinforces reasons for the Noise Bylaw, and also consider putting up signs in hot spots regarding vehicles being loud in an area.

Yours truly,

A handwritten signature in black ink, appearing to read 'Joanne Sproule'.

Joanne Sproule
Secretary, Board of Police Commissioners

JS:jh

Attachment

cc: General Manager, Transportation & Construction Department T. Schmidt
Chief of Police T. Cooper
Chair, Saskatoon Board of Police of Commissioners D. Brander

"PUBLIC AGENDA"

TO: Darlene Brander, Chairperson
Board of Police Commissioners

FROM: Troy Cooper
Office of the Chief

DATE: 2019 September 09

SUBJECT: Traffic Noise Due to Vehicle Mufflers

FILE NO.: 2,012-7



ISSUE:

At the February 21, 2019 meeting the Board of Police Commissioners considered a communication from the City's Transportation Division regarding traffic noise due to vehicle mufflers. The Board resolved that the information be received and forwarded to the Chief of Police for follow up and report.

RECOMMENDATION:

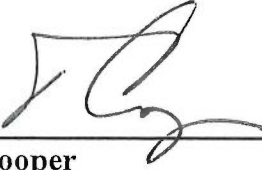
That this report be received in response to the February 21st resolution of the Board.

Written by: Patrick Barbar
Staff Sergeant, Traffic Section

Approved by: Larry Vols
Inspector, Specialized Uniform Operations Division

Mitch Yuzdepski
Deputy Chief, Support Services

Submitted by:



Troy Cooper
Chief of Police

Dated:
(attachment)

September 11, 2019

Traffic Noise

Prepared by: Staff Sergeant P. Barbar
Traffic Unit

Understanding the Problem

Noise pollution caused by vehicles is an issue that every Canadian city is struggling with to varying extents. Not only do unmodified cars create noise, but in a car culture such as ours, there are a significant number of modified vehicles that are intentionally equipped to emit louder than factory engine noise by installing aftermarket muffler systems.

In Saskatoon, it is these types of cars that generate the majority of public complaints relating to noisy traffic. Although some types of motorcycles can also generate loud noise, their smaller numbers mean that significantly fewer complaints are received about them.

The prevalence of cars with modified muffler systems has increased in recent years, primarily due to popular culture. These are typically not what most would consider classic or collector cars, but rather are moderate performance imports that are easy to modify and for which a wide variety of accessories is available.

The Saskatoon Police Service typically receives complaints about noisy cars from all parts of the city. However, the bulk of complaints come from 8th Street and Spadina Crescent residents.

On 8th Street specifically, which for generations has been considered the “cruising” street in Saskatoon, the noisy car problem has become intertwined with a vagrancy problem in business’ parking lots. The Centre Mall is a primary example of this, where fights and other disturbances have erupted as a result of the large number of “cruisers” simply hanging out on the property.

On a typical summer Friday or Saturday night, several dozen of these modified cars will spend the night cruising 8th Street, accelerating heavily at green lights and stunting as they use legal u-turn areas that are provided at various locations. At times, 50 or more of these cars will occupy parking lots, such as the Wholesale Club at Preston Avenue.

With many of these cars, even the slightest acceleration will produce noise that can be heard for several blocks.

Some of our city’s events encourage this behavior. For example, during the Rock 102 Show and Shine weekend in August, a tradition known as Cruise Night has existed for decades. Although this is not a sanctioned event, thousands of cars descend on 8th Street every evening in order to show off and cruise. The noise generated during Cruise Night can be heard in neighborhoods several kilometers away.

Legislation

Legislation that addresses the issue of noisy cars can be found in the Traffic Safety Act (TSA), the Vehicle Equipment Regulations Act (VER) and the Saskatoon Noise Bylaw.

Section 215 of the TSA states:

No person shall create or cause the emission of any loud and unnecessary noise from a motor vehicle, a part of a motor vehicle or any thing or substance that the motor vehicle or a part of the motor vehicle comes into contact with.

This is a very subjective charge and requires an element of intentionality on the part of the person causing the noise. It also requires some evidence that someone may have been disturbed by the noise. The fine for this section is set at \$100.

Section 18 of the VER states:

The vehicle shall have a muffler that effectively reduces combustion noise.

This section is more objective but does require officers to have a minimal amount of mechanical knowledge as they will be required to describe the offending equipment in court. The fine is set at \$115.

Section 5.1 of the City of Saskatoon Noise bylaw states the following:

Without limiting the generality of section 5, for the purpose of regulating motor vehicle noise, the following provisions shall apply:

(a) no person shall operate a motor vehicle in such a manner that it makes, continues, causes to be made or continues or suffers or permits to be made or continued any unreasonably loud or excessive noise;

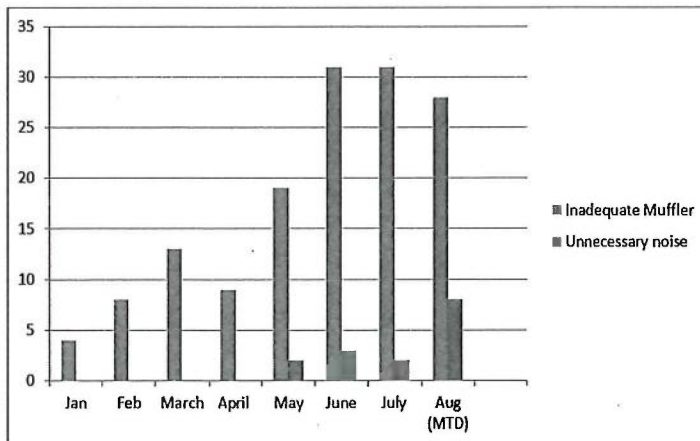
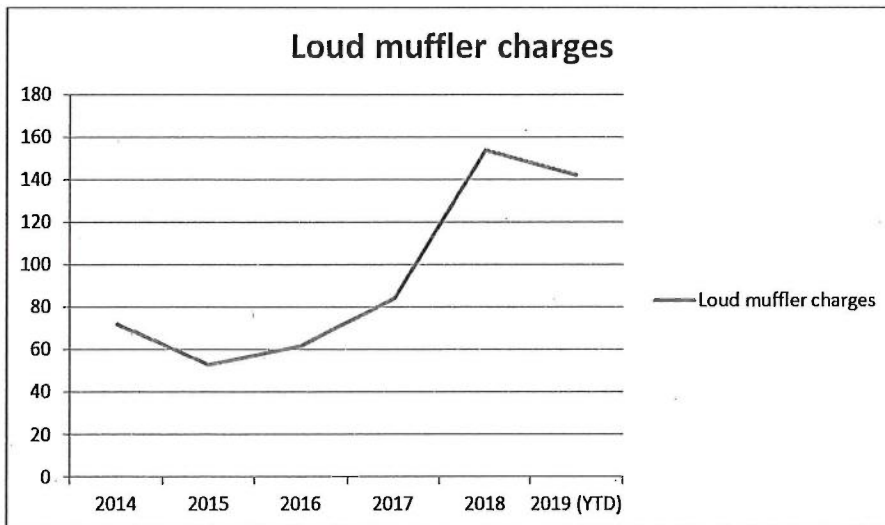
(b) in determining whether the noise from a motor vehicle is unreasonably loud or excessive, a justice may consider any of the factors mentioned in subsection 5(2); and

(c) no person shall operate a motorcycle within the City of Saskatoon that is capable or emitting any sound exceeding 92 dB(A), as measured by a sound level meter at 50 centimeters from the exhaust outlet while the engine is at idle; or emitting any sound exceeding 96 dB(A), as measured by a sound level meter at 50 centimeters from the exhaust outlet while the engine is at any speed greater than idle.

Subsection (a) creates a redundancy with the TSA. Subsection (c) does create a new offence for which specialized equipment and training is required.

Enforcement

Over the years, enforcement has been done to varying degrees.



From 2017 to 2018, the amount of charges related to noisy vehicles almost doubled, and 2019 is on track to top 2018. This is attributable to better awareness by police officers with more education about the specific issue, and also to a greater number of offending vehicles on our roads.

Although the problem is a year round one, our statistics demonstrate that it is clearly of greater concern during the summer months.

When looking closely at 8th Street, it was determined that of all the traffic enforcement done in the city, 8th Street receives about 11% of the Summary Offence Tickets issued. However, when looking specifically at noise violations, 41% of all tickets issued in the city are issued on 8th Street.

In addition to enforcement activity, the Saskatoon Police Service Traffic Unit undertook a multi-faceted educational campaign in June of this year.

Primarily, the campaign involved social media messaging aimed at educating motorists about the impact of noisy vehicles on their fellow citizens. Using the hash tag #KeepItDown, the campaign spoke of respecting neighbours and of the nuisance created by loud cars in and near residential areas.

In conjunction with this, several voluntary testing clinics were set up for motorcycles at various locations during the month. It is important to remember that the bylaw only provides specific sound levels for motorcycles, and that this type of measurement cannot be performed on cars and trucks.

Police also conducted noise checkpoints where motorcycles were flagged into a testing area as part of an enforcement campaign. Very few of them surpassed the set limits, which many people may have interpreted as excessive.

Finally, Traffic Unit representatives spoke to local media outlets in an effort to get the message out to an even bigger audience. Several print and radio stories came out of those efforts.

At the same time, traffic unit members received training and information about the noise issue in order to be more effective on the enforcement front.

In July, SGI was consulted in order to find a solution to the compliance issue. Even when a ticket was given, motorists were not removing the offending equipment and several received subsequent tickets. This does not present a long term solution to the problem.

SGI agreed that they would send compliance letters to offenders, giving them 30-days to fix the issue or face the cancellation of their registration.

Saskatoon

Number of noisy drivers ticketed on Saskatoon roads climbing

f t e in

Police say 162 tickets for noise given out in 2018

Morgan Modjeski • CBC News • Posted: Jun 07, 2019 12:56 PM CT. | Last Updated: June 7



A device used to measure decibel levels on motorcycles can be seen collecting a sample from a Saskatoon police motorcycle in a photo posted to the official Twitter account of the traffic unit with the Saskatoon Police

Solutions

Moving ahead, a number of ideas have been identified by police, city staff and by members of the public that may help reduce the quantity of vehicles that produce excessive noise. Some of these are as follows:

City led educational campaign: An annual month long campaign undertaken by the city of Saskatoon aimed at educating citizens about the fact that their actions in creating loud noises, impact the quality of life of their neighbours and fellow Saskatonians.

Quiet zone signage: Signage that overtly states that motorists are entering residential areas and asking them to reduce vehicle noise.

Higher fines: Lobbying the province to impose stiffer penalties on noise related offences.

Re-examining the usefulness of U-turn areas on 8th Street: The argument made for the existence of these u-turn areas is to access business on the opposite side of the street. However, 22nd Street has a similar configuration without any u-turn lanes. The lanes contribute to the noise problem and other traffic issues such as collisions and stunting.

Noise monitoring stations: The city of Edmonton was employing four such stations. Through usage, they determined that they could not use these as an automated enforcement option. Furthermore, the display on the stations, which was meant to raise awareness about noise levels, actually caused a large proportion of motorists to produce more noise in an effort to see how high they could get the reading. As of May, 2019, Edmonton operates staffed noise monitoring units. They use Community Peace Officers to operate the units and to ticket violators. This is being done as a pilot project at this point and no data is available about its effectiveness.

Conclusion

Clearly this problem is more complex than any individual or agency can solve on its own. A collaborative effort will be required to initially address this issue and to bring awareness of it to our city.

A multifaceted approach needs to be undertaken by the City of Saskatoon and partnering agencies to ensure the proper awareness, education and enforcement is provided.

Noise is a part of urban life, as a city, we need to decide how much we can accept and what we are prepared to do to either come up with solutions or to simply accept the status quo.

375-2

6.1.1.

From: Terry Neefs <City.Council@Saskatoon.ca>
Sent: Monday, June 10, 2019 9:11 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Monday, June 10, 2019 - 21:10
 Submitted by anonymous user: 174.2.174.245
 Submitted values are:

Date: Monday, June 10, 2019
 To: His Worship the Mayor and Members of City Council
 First Name: Terry
 Last Name: Neefs
 Email: [REDACTED]
 Address: [REDACTED] Peberdy Terrace
 City: Saskatoon
 Province: Saskatchewan
 Postal Code: S7K [REDACTED]
 Name of the organization or agency you are representing (if applicable):
 Subject: Anti-social driving - noise pollution
 Meeting (if known):
 Comments:

There are many less critical but very important touch points which can make a mediocre city a great one. Saskatoon is becoming plagued with increasing incidents of anti-social driving. There are a growing number of car-truck-motorcycle enthusiasts with low/no restriction mufflers who race their engines to show off their loud vehicles. This can be done while not necessarily speeding, by using a low transmission gear or by shifting to neutral to rev the engine. The resulting noise is especially evident in our downtown core where drivers get a kick out of racing their engines in bridge underpasses. When attending Shakespeare on the Saskatchewan events in the past, my wife and I have never enjoyed an evening without hearing the loud roar of a "Harley" or muscle car on Spadina. The same applies when trying to enjoy a quiet stroll on the MVA trail. These sudden raucous sounds are very annoying for the average person and can be especially unnerving for children and seniors.

This type of narcissist, noise-pollution behavior is totally unwarranted and needs to be curtailed. We have traveled extensively and the more progressive cities in Europe such as London and Paris have anti-social driving laws with indicative signs such as "Anti-social Driving Prohibited" posted in their city centers. Saskatoon strives to portray itself as a forward thinking progressive city so it needs to address this behavior especially in the downtown core where pedestrian traffic abounds. Bylaw 8244 (section 5.1) does not address noise measurement decibels regarding short, intermittent, full-rev bursts of a loud engine. It also does not address the related behavior of those drivers. Thus it would be most reasonable to implement an anti-social driving bylaw (or amendment to bylaw 8244) with related signage entering the downtown core.

Please consider this issue, as the majority of Saskatoon citizens will be most appreciative in making our city more attractive and welcoming.

Your timely response is appreciated.

Attachments:

The results of this submission may be viewed at:
<https://www.saskatoon.ca/node/398/submission/316426>

From: Terry Neefs <[REDACTED]>
Sent: Sunday, November 03, 2019 7:19 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Sunday, November 3, 2019 - 19:19

Submitted by anonymous user: 207.195.86.170

Submitted values are:

Date Sunday, November 03, 2019

To His Worship the Mayor and Members of City Council

First Name Terry

Last Name Neefs

Email [REDACTED]

Address [REDACTED] Peberdy Terrace

City Saskatoon

Province Saskatchewan

Postal Code S7K [REDACTED]

Name of the organization or agency you are representing (if applicable)

Subject Re: 7.1.2. Vehicle Noise Update (File No. CK. 375-2)

Meeting (if known) Standing Policy Committee on Transportation

Comments

Hello,

I regret being unable to speak at this meeting as we are out of town. However I have additional comments:

- With respect to specialty or modified vehicles, the key cause of loud vehicle engine muffler noise is less about the vehicle and more about driver behavior. I too own a specialty vehicle and am very conscious of driving it responsibly and respectfully especially in the downtown core, on residential streets and dense pedestrian areas where noise has a high impact. As stated in my previous letter, it is quite easy to curtail a loud vehicle's noise level by driving it in a higher gear at lower engine revs and by not accelerating hard.

- As for solutions, the best opportunity to reduce this type of vehicle noise is to alter driver behavior in the following ways; 1) create and promote an education program which highlights the negative and harmful impact of loud vehicular noise and its affects on the general public, 2) post signage in key areas and entrances to the city's core which indicate "Fines for Anti-social driving", 3) engage the various automotive clubs in the city to be champions and role models of responsible low-noise driving. They could also educate and distribute brochures, pins, etc, at various club events as well as the many special events such as local car show-and-shines, Draggins car show, Cruz weekend, etc. Actions such as this would educate those role models who would create peer pressure which can be a powerful motivator.

We are a growing city striving to be progressive in a world of increasing forms of pollution. Saskatoon residents and ratepayers would welcome less overall vehicular noise pollution with the added side effect of slowing down traffic and making our streets safer.

Attachments

The results of this submission may be viewed at:

Request for Approval of Accessibility Educational Event

ISSUE

This report outlines the level of involvement by the Administration, as requested, to support an Accessibility Educational Event hosted by the Saskatoon Accessibility Advisory Committee.

BACKGROUND

The Saskatoon Accessibility Advisory Committee (Advisory Committee) presented a report at the August 6, 2019, Standing Policy Committee on Transportation outlining a proposal to host an accessibility educational event in November 2019. The Transportation Committee requested further information related to the level of involvement by the Administration, to support the event.

DISCUSSION/ANALYSIS

Administration and members of the Advisory Committee, Education and Awareness Sub-Committee, met on September 13, 2019, to discuss the proposed educational event and level of Administrative involvement. As a result of the discussion, the Advisory Committee proposed the event be held in May 2020.

The educational event will be planned and organized by the Advisory Committee and funded through their existing budget. The Advisory Committee is extending an open invitation to Administration to participate in the event as an opportunity to provide education and awareness on current City of Saskatoon programs and services, as well as an invitation to accessibility advocacy groups in the community.

The Advisory Committee is requesting to use Administrative marketing and communication resources to develop material for the event, with associated costs funded from their Advisory Committee budget.

Further information related to the educational proposal is outlined in Appendix 1.

IMPLICATIONS

The level of Administrative involvement requested by the Advisory Committee can be supported by Administration. Several Divisions, including Building Standards, Transit, Human Resources and Recreation and Community Development, are interested in participating in the event as an opportunity to promote their current programs and services.

NEXT STEPS

Saskatoon Accessibility Advisory Committee will continue planning to support the event.

APPENDICES

1. Appendix 1 – Letter from Saskatoon Accessibility Advisory Committee

REPORT APPROVAL

Written by: Kara Fagnou, Director Building Standards

Approved by: Lynne Lacroix, General Manager, Community Services Department

SP/2019/BS/SPC Trans/ Request for Approval of Accessibility Educational Event/jdw



Office of the City Clerk
222 3rd Avenue North
Saskatoon SK S7K 0J5

www.saskatoon.ca
tel (306) 975.3240
fax (306) 975.2784

October 1, 2019

City Administration

Re: Saskatoon Accessibility Advisory Committee Education and Awareness Subcommittee – September 13, 2019 Event follow up meeting details

Something new --- an “Accessibility Education and Awareness Expo” with the theme~ *Saskatoon Shines --- a leader by example* is planned for **SATURDAY May 30, 2020 from 10:00 a.m. to 4:00 p.m.** at the **Shaw Centre 122 Bowlt Crescent.**

Exhibitor and Presenter Information

We extend an invitation to various City of Saskatoon departments to engage with members of the public who have a disability, their families, seniors, veterans, and healthcare professionals. We look for your early response so we can plan for accommodating those who will wish to make verbal presentations and for exhibitors for whom having a “booth”/table will meet their needs. This same invitation is offered to accessibility advocacy groups across Saskatoon. By target marketing of accessibility advocacy groups through use of posters, media, Eventbrite, Facebook event pages, etc we estimate 200-400 members of the public will attend. An invitation will be extended to the media for this event, which may showcase the fine work the city is doing as displayed at the Expo.

Your involvement might be in these various ways:

1. Hosting a booth to offer education and awareness materials, being ready to answer questions, using a table in the Shaw lobby entrance, /or
2. Offering a workshop and/or
3. Providing a speaker using a maximum of 20 minutes to showcase what the department is doing or has done with regards to accessibility. Those wishing to speak must provide in writing the name of the speaker, their title, their department, and a brief outline of their speech, to facilitate an introduction
4. If you submit in writing that you would like the opportunity to be a presenter, and find you must cancel, please advise if an alternate speaker can be found, advising in writing
5. Booths where accessibility education and awareness material and information are available may also be shared between departments.

The time of the Expo is 10:00 a.m. to 4:00 p.m. and you may arrive one hour early for set up and stay one hour for packing up.

Presenters and exhibitors will complete an evaluation form so the Accessibility Awareness Committee has feedback to inform planning for any potential future projects.

To enhance the accessibility experience at the **Accessibility Education and Awareness Expo** information will be included in a printed program as well as hopefully through a QR audiotour compiled by the Education and Awareness Sub Committee volunteers. For these participants with each booth will need to provide a written description of no more than 5,000 characters indicating the department name, and the accessibility education and awareness information available. If possible, please supply an image no larger than 5MB.

The “**Accessibility Education and Awareness Expo**” is a free public awareness event with the marketing, planning, and organising being carried out by the volunteers of the Education and Awareness Subcommittee of the Accessibility Awareness Committee. The event planning and coordination expenses will be met from the budget of the Accessibility Awareness Committee. Materials on display and staffing for the booths is the responsibility of each department requesting the opportunity to be an exhibitor. There are no exhibitor fees charged to participate at this event.

We look forward to you being a part of the 2020 **Accessibility Education and Awareness Expo**. Together we will be **leaders by example**.

Kind Regards

Julia Adamson
Chair Education and Awareness Sub-Committee

Snow Clearing of Adjoining Cycling Infrastructure and Sidewalks

ISSUE

Due to the timing of when the property owners clear snow from the sidewalks and the city clears snow from the adjacent cycling infrastructure, there are occasions when snow from the adjoining sidewalk is placed into the cycling infrastructure along 23rd Street between Spadina Crescent and Idylwyld Drive, after the cycling infrastructure has already been cleared following a snowfall.

BACKGROUND

City Council at its Regular Business Meeting held on August 13, 2018, considered the Update to Bylaw No. 8463, The Sidewalk Clearing Bylaw, 2005 which revised the requirement for owners or occupants to clear the sidewalk in front of their properties within 24 hours of a snowfall and resolved, in part:

- “4. That the Administration report on potential options available to mitigate the problems (time gap) with snow removal between the sidewalks and the bike lanes.”

Snow clearing of the sidewalk is the responsibility of the owner or occupant of the adjoining property. Snow clearing of the adjoining cycling infrastructure is the responsibility of the City of Saskatoon.

In 2018, City Council approved an update to Bylaw No. 8463, The Sidewalk Clearing Bylaw, 2005. The update permitted the owner or occupant of the adjoining property to clear or remove snow by placing it in the adjacent cycling infrastructure along 23rd Street. Prior to this change, all snow from the sidewalk had to be placed on private property.

Temporary dedicated bike lanes were installed between the parking lane and the sidewalk in 2015 in this area as a pilot project. The resulting recommendation was to keep the lanes until a downtown Active Transportation Network was developed. Stakeholder consultation on the design of the network will begin in 2021 with a report back to the Standing Policy Committee prior to the end of 2021. Options for better coordination of snow removal with the owner or occupant of the adjoining property will be considered during the design of the Active Transportation Network.

CURRENT STATUS

The City of Saskatoon does not have an approved level of service for snow clearing of cycling infrastructure. The current practice is to clear the cycling infrastructure within 24 hours of a snowfall.

After the cycling infrastructure is initially cleared by the City, cyclists frequently encounter snow piles. The piles are from the snow clearing of the adjacent sidewalk.

Snow Clearing of Adjoining Cycling Infrastructure and Sidewalks

Those sections of the cycling infrastructure are then cleared again by the City to provide full mobility to cyclists.

The property owners or occupants that place snow into the cycling infrastructure after it has already been cleared are not in violation of the Sidewalk Clearing Bylaw as long as the snow is cleared from the sidewalk within 24 hours of the snowfall end.

DISCUSSION/ANALYSIS

Public Engagement

Residents were engaged in a survey in early 2017 on winter road and sidewalk maintenance. Those residents who use the downtown protected cycling infrastructure were further asked about their experience:

- 15% did not experience challenges or restrictions,
- 63% did experience challenges, but the cycling infrastructure was useable; and
- 22% indicated cycling infrastructure was not useable over the winter.

Options to mitigate the time gap of snow removal between sidewalks and the bike lanes have been reviewed and are provided below:

Option	Description	Advantages/Disadvantages
1. Status Quo with improved communication with the owner or occupant of the adjoining property	<p>This option maintains the current practice. The owners or occupants of the adjoining properties along 23rd Street between Spadina Crescent and Idylwyld Drive would remain responsible for clearing snow from the sidewalk and placing it in the adjacent cycling infrastructure within 24 hours of a snow fall.</p> <p>Improved communication with the owners or occupants of the adjoining properties would be carried out. The purpose of the improved communication would be to ensure they are aware of the cycling infrastructure clearing schedule. This would minimize the number of occurrences where snow is placed in the cycling infrastructure after it has already been cleared.</p>	<p><u>Advantages:</u></p> <ul style="list-style-type: none">▪ No additional costs for the City.▪ Improved communication may reduce the number of instances where the owners or occupants push snow into the cycling infrastructure after it has already been cleared. <p><u>Disadvantages:</u></p> <ul style="list-style-type: none">▪ Cyclists may continue to experience instances where they encounter snow piles after the cycling infrastructure has already been cleared.▪ Inefficient due to City crews having to return to clear snow from the bike lanes.

Snow Clearing of Adjoining Cycling Infrastructure and Sidewalks

Option Cont.	Description Cont.	Advantages/Disadvantages Cont.
2. City of Saskatoon removes snow from both, sidewalk and cycling infrastructure	<p>The City of Saskatoon assumes responsibility for clearing the sidewalk along 23rd Street between Spadina Crescent and Idylwyld Drive until the expanded downtown Active Transportation Network is in place.</p> <p>This option ensures that both the sidewalk and cycling infrastructure are cleared at the same time.</p>	<p><u>Advantages:</u></p> <ul style="list-style-type: none"> ▪ Cyclists would not experience piles of snow in the cycling infrastructure after it has already been cleared by the City. ▪ No repeat City crew visits to clear snow from the cycling infrastructure. <p><u>Disadvantages:</u></p> <ul style="list-style-type: none"> ▪ Additional annual cost of \$30,000. ▪ Property owners or occupants along 23rd Street receive a service from the City while the owners or occupants along other routes are responsible for clearing the adjoining sidewalk. ▪ May raise expectations from the owners and occupants along 23rd Street that the City will continue to clear snow from the adjoining sidewalk after the expanded downtown Active Transportation Network is in place.
3. Owner or occupant of the adjoining property clears the cycling infrastructure	<p>This option includes amending the Sidewalk Clearing Bylaw further to have the owner or occupant of the adjoining property be responsible for clearing both the adjoining sidewalk and cycling infrastructure along 23rd Street.</p>	<p><u>Advantages:</u></p> <ul style="list-style-type: none"> ▪ Cyclists would not experience piles of snow. <p><u>Disadvantages:</u></p> <ul style="list-style-type: none"> ▪ Property owners would be required to either invest additional time and effort, or incur additional costs to clear the snow from the cycling infrastructure. ▪ Cycling infrastructure would not all be cleared at the same time.

The annual cost of snow clearing of the cycling infrastructure along 23rd Street would increase by approximately twofold if Option 2 were selected. Regardless of the challenges with the snow piles, 78% of residents surveyed in 2017 indicated the downtown cycling infrastructure was useable in the winter months. This indicates that the benefits of Option 2 would be small relative to the incremental cost.

Option 3 would create hardship for the adjacent owners or occupants. Additionally, it would only result in improved winter cycling conditions if the clearing work by multiple owners or occupants were all done at the same time, which would be unlikely to occur.

Approaches in Other Jurisdictions

The City of Calgary has protected cycling infrastructure adjacent to their sidewalks similar to Saskatoon, however, they generally do not have adjacent parking lanes. The owners or occupants of properties adjacent to the cycling infrastructure are instructed to pile snow at the edge of the sidewalk. This approach is not recommended for Saskatoon as the snow piles on the sidewalk create a hazard for those approaching parked vehicles from the sidewalk.

The City of Edmonton encourages the owners or occupants of the adjoining properties not to deposit snow into the cycling infrastructure. Edmonton inspects their cycling infrastructure and if they find snow piles, they will remove them. Edmonton is planning an assessment to determine strategies for next year's winter season.

The City of Winnipeg clears all sidewalks and cycling infrastructure.

The City of Regina does not have cycling infrastructure protected with delineation posts. Their cycling infrastructure is on the street with no physical features separating it from the traffic lane, so they clear the cycling infrastructure and traffic lane at the same time.

IMPLICATIONS

There are no financial, legal, social, or environmental implications identified.

NEXT STEPS

The Administration will continue with the current practice of clearing cycling infrastructure within 24 hours of a snowfall or as directed by City Council.

Report Approval

Written by:	Tracy Danielson, Roadways Manager
Reviewed by:	Goran Saric, Director of Roadways, Fleet & Support Jay Magus, Director of Transportation
Approved by:	Terry Schmidt, General Manager, Transportation & Construction Department

From: Brent Penner <brent.penner@dtntyxe.ca>
Sent: Sunday, November 03, 2019 9:15 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Sunday, November 3, 2019 - 21:14

Submitted by anonymous user: 96.125.245.227

Submitted values are:

Date Sunday, November 03, 2019
To His Worship the Mayor and Members of City Council
First Name Brent
Last Name Penner
Email brent.penner@dtntyxe.ca
Address 242 3rd Avenue South
City Saskatoon
Province Saskatchewan
Postal Code S7K 1L9
Name of the organization or agency you are representing (if applicable) Downtown Saskatoon
Subject Snow Clearing in Bike Lanes (7.1.4) & Parking Sign Removal (7.1.9)
Meeting (if known) SPC on Transportation
Comments
Good evening,

I would like to briefly speak to items 7.1.4 and 7.1.9 at the Committee meeting tomorrow.

Thank you,

Brent Penner
Executive Director
Downtown Saskatoon
Attachments

The results of this submission may be viewed at:

<https://www.saskatoon.ca/node/398/submission/347554>

Whistle Cessation and Railway Crossing Projects

ISSUE

This report summarizes the current status of the rail whistle cessation process at four grade railway crossings where train whistling has been identified as an ongoing concern by residents.

BACKGROUND

Transport Canada's Canadian Rail Operating Rules require all trains to whistle whenever they approach a public grade crossing. If a municipality wishes to make a request to stop train whistling, the first step in the process is to assess the crossing to determine if it meets whistling cessation requirements specified in the Grade Crossings Regulations and Standards published by Transport Canada. If the assessment determines the crossing meets the criteria and the railway company agrees, the municipality must issue a public notice, pass a resolution saying it agrees train whistling shall not be used at the crossing, and send a copy of the resolution to the railway company and all relevant stakeholders (including Transport Canada).

CURRENT STATUS

The status of whistle cessation for individual crossings in the City is at different stages of the process.

DISCUSSION/ANALYSIS

There are four grade crossings where the City is either actively pursuing whistle cessation or will be initiating the process.

Marquis Drive Crossing, CN Warman Subdivision, Mile 8.50

Train whistling is primarily affecting the Silverwood Heights and Lawson Heights residents. The application for whistle cessation at this crossing began in 2015 with Canadian National Railway (CN) followed by completion of a grade crossing safety assessment, implementation of improvements by the City identified through the assessment, and finally a recent completion of required upgrades by CN.

The final safety concern that was to be addressed before CN will agree to implement whistle cessation is the requirement that the City install concrete barriers around the gates and warning flashers for protection from vehicles and road maintenance equipment. The installation of low-profile concrete barriers was completed in mid-October 2019.

Following the final approval by CN, the Administration will present an approval report to City Council requesting a resolution for whistle cessation, and subsequently send copies of the resolution to relevant stakeholders. Upon receiving the resolution, CN is required to issue special instructions to stop train whistling. It is anticipated that whistle cessation would come into effect in early 2020.

Range Road 3051 in the RM of Corman Park, immediately south of Stonebridge

Even though the crossing is outside the city limits, Stonebridge residents have petitioned the City to take action to stop train whistling. In January 2019, City Council resolved that the City of Saskatoon and the RM of Corman Park (RM) cost share the completion of the safety assessment.

In June 2019, the RM hired an engineering consultant to complete the study. The Administration is awaiting the final report to review the assessment findings and discuss with the RM the available options and next steps. Any recommendations that have cost implications will require City Council approval.

Highway 7 Crossing, CP Wilkie Subdivision, Mile 4.44

This crossing was upgraded in 2018 to improve public safety by adding gates, constant warning system and a new Canadian Pacific Railway (CP) bungalow. The next step in the whistle cessation process is to hire an engineering consultant to complete a grade crossing assessment to verify that the crossing fully meets the criteria for whistle cessation, or identify if additional improvements are required.

The assessment will be commissioned and completed by March 2020, at which time it will be shared with CN for their review and input.

Fairlight Drive Crossing, CP Wilkie Subdivision, Mile 3.37

This crossing was upgraded in 2018 to improve public safety by adding gates for improved protection, a constant warning system and a new CP bungalow. A safety assessment is required to determine compliance with the standards. The crossing has an element of added complexity and compliance uncertainty due to existence of two sets of tracks with different operating speeds (CP mainline and Viterro spur line operated by CN) that are both protected by the same protection devices.

The safety assessment will be completed in conjunction with the Highway 7 crossing study by March 2020 and the report recommendations discussed with all stakeholders (CP, CN and Viterro).

IMPLICATIONS

Capital Project #2288 - TU - Transportation Safety - Railway Crossing Safety Improvements has proposed funding of \$100,000 in each year of the 2020/2021 Capital Budget and will fund the whistle cessation assessment studies and required infrastructure.

If additional funding is required to meet the infrastructure standards for whistle cessation, the Administration will provide City Council a report with funding options at the appropriate time.

There are no legal, social, or environmental implications.

NEXT STEPS

The Administration will provide an update to the Standing Policy Committee on Transportation upon completion and review of the grade crossing assessments at Range Road 3051, Highway 7, and Fairlight Drive. The report is anticipated for summer of 2020.

Report Approval

Written by: Goran Lazic, Senior Transportation Engineer
Reviewed by: David LeBoutillier, Engineering Manager, Transportation
Jay Magus, Director of Transportation
Approved by: Terry Schmidt, General Manager, Transportation & Construction
Department

Admin Report - Whistle Cessation and Railway Crossing Projects.docx

Inquiry – Councillor Z. Jeffries (August 26, 2019) Dust Issues – Beef Research Road

ISSUE

Beef Research Road is a high traffic gravel road located close to a residential neighbourhood. Dust generated from the gravel surface is impacting visibility and safety on Beef Research Road, Central Avenue and Attridge Drive, and air quality for neighbouring residents.

BACKGROUND

The following inquiry was made by Councillor Z. Jeffries at the meeting of City Council held on August 26, 2019:

"Can Administration please report back on how dust issues from Beef Research Road affecting Silverspring can be solved? This could include additional dust mitigation applications or the paving of Beef Research Road. The current level of service of only applying palliation solution twice annually is not sufficient."

Beef Research Road is a gravel road about 2 km in length located on land owned by the University of Saskatchewan. It is adjacent to Central Avenue and Attridge Drive with an approach onto Central Avenue. It provides access to the University of Saskatchewan's Beef Research & Teaching Facility (now closed), adjacent farmland, and Sutherland Off-Leash Recreation Area, one of Saskatoon's most popular Off-Leash Recreation Areas. Current traffic on Beef Research Road is estimated to be about 700 vehicles per day.

An agreement from 2006 gives the City access to the University land to use as a public road, with the responsibility to maintain and repair the road.

Beef Research Road was extended north-south to connect to Central Avenue as part of the North Commuter Parkway project in 2016. Dust and air quality concerns from neighbouring residents increased following the construction of the north-south extension of Beef Research Road.

The University of Saskatchewan, in partnership with the City of Saskatoon, is currently working on a Sector Plan for the future development of the adjoining land. Beef Research Road may not exist once development takes place. Alternate access to Sutherland Off-Leash Recreation Area will need to be provided once new development occurs. The timing of the development of the University of Saskatchewan lands and the changes to Beef Research Road are not known and will be better understood when the Sector Plan is completed.

Beef Research Road is different from other gravel streets in Saskatoon due to the following factors:

- high traffic volumes,
- higher operating speed of vehicles,
- proximity to a residential neighbourhood, and
- dust is causing road safety and air quality concerns.

CURRENT STATUS

The gravel surface of Beef Research Road combined with the high traffic volumes creates a lot of dust. The dust creates safety concerns for drivers, pedestrians, pets and cyclists on Beef Research Road due to reduced visibility. The dust travels to the neighbouring area of Silverspring impacting the air quality and has at times, impacted visibility for drivers along Attridge Drive and Central Avenue.

Both traditional and innovative dust suppressant materials applied to Beef Research Road have not been effective in suppressing the dust. There is no dust suppressant product that will completely eliminate all dust, and the high traffic volumes make it difficult for any dust suppressant materials to perform well. Periods of dry weather conditions in 2019 contributed to the dust issues.

A new product called Green Bond, made from canola oil rather than the traditional salt brine product, is being piloted along Beef Research Road to suppress dust. This product is environmentally friendly as it reuses waste cooking oil and does not add salt to surface water run-off, like traditional dust suppressant does. The pilot study will continue for at least one more year.

DISCUSSION/ANALYSIS

The City of Saskatoon maintains Beef Research Road by applying gravel, blading the road and applying dust suppressant twice a year as outlined in the approved Level of Service for gravel road maintenance in and around Saskatoon. The dust suppressant treatment occurs in the spring and again in the fall. The City of Saskatoon also applies water to the road surface at various times.

Options to reduce the dust generated along Beef Research Road have been reviewed and are provided below:

Option	Description	Cost
1. Increase Level of Service to include more dust suppressant applications	<ul style="list-style-type: none">• This option consists of increasing the number of applications of traditional dust suppressant for Beef Research Road.• It is expected that four applications per year are required to effectively address the concerns with the dust on Beef Research Road.• To ensure consistency, current service level criteria in the Street Cleaning and Sweeping Level of Service would be amended.	<ul style="list-style-type: none">• The estimated incremental cost of two additional applications of traditional dust suppressant is approximately \$34,000 per year.• This cost estimate includes additional materials, equipment and labour to ensure the product performs well.• This option would require additional operating funding under the Street Cleaning and Sweeping service line.

Inquiry – Councillor Z. Jeffries (August 26, 2019) Dust Issues – Beef Research Road

Option-Continued	Description-Continued	Cost-Continued
2. Construct a dust-free surface along entire road	<ul style="list-style-type: none">• This option consists of reconstructing the entire length of Beef Research Road to a dust free surface through the placement of asphalt concrete or other materials.	<ul style="list-style-type: none">• The estimated cost of this option is \$1.5 million of capital funding.
3. Construct a dust-free surface along north-south section of road	<ul style="list-style-type: none">• This option consists of reconstructing the north-south section of Beef Research Road to a dust free surface through the placement of asphalt concrete or other materials. The section is approximately 500 metres long.• The remainder of Beef Research Road would remain as a gravel road. It would not reduce the dust on the remainder of Beef Research Road or along Attridge Drive.• This option would help reduce the dust experienced by the Silverspring residents and the dust along Central Avenue.	<ul style="list-style-type: none">• The estimated cost of this option is \$450,000 of capital funding.

The disadvantages of constructing a dust-free surface on Beef Research Road are the high cost, the road is not on City property, and the investment would be short term due to future development plans of the adjoining land. The University of Saskatchewan does not desire to upgrade the road as development plans do not include a roadway at this location.

Increased dust suppressant could be applied for a number of years before the total cost would be equivalent to the capital cost of constructing a dust free surface.

IMPLICATIONS

The University of Saskatchewan is concerned with the environmental impact of materials used to reduce the dust and environmental impact of future road reclamation as part of future development. The City of Saskatoon will continue its pilot of Green Bond, the more environmentally friendly product, along Beef Research Road to assess if this product can perform as well as the traditional dust palliation products used.

There are no financial, legal or social implications identified.

NEXT STEPS

The Administration will continue with the current maintenance of Beef Research Road by applying dust suppressant twice per year or as directed by City Council.

Report Approval

Written by: Tracy Danielson, Roadways Manager, Roadways, Fleet & Support
Reviewed by: Goran Saric, Director of Roadways, Fleet & Support
Reviewed by: Ian Williamson, Senior Planner, Community Services

Approved by: Terry Schmidt, General Manager, Transportation & Construction
Department

Admin Report – Inq – C. Jeffries-Aug 26-19 – Dust Issues – Beef Research Road.docx

Chief Mistawasis Bridge Traffic Impact Assessment

ISSUE

Chief Mistawasis Bridge opened October 2, 2018. The bridge provides a connection between Marquis Drive on the west and McOrmond Drive on the east. Traffic patterns were impacted at a number of studied locations.

BACKGROUND

This report quantifies the impacts to traffic at various locations following the opening of the Chief Mistawasis Bridge.

CURRENT STATUS

Traffic signal adjustments took place at intersections near the Chief Mistawasis Bridge prior to opening day and subsequent to the opening, traffic signals at various intersections in the city have been modified according to observed changes in demand. No intersection improvements have been made. The analysis included in Appendix 1 reflects the current conditions.

DISCUSSION/ANALYSIS

A traffic impact assessment after the Chief Mistawasis Bridge opened was completed. The assessment included quantifying the impact the bridge had on daily traffic volumes on specific road segments and other bridges, as well as the analysis of the impact on weekday peak hour traffic at several key signalized and unsignalized intersections.

The assessment of daily traffic volumes was completed on 15 different road segments, specifically reviewing the change to average daily traffic since the bridge opened. On the Chief Mistawasis Bridge the average daily traffic was 9,900. On the Circle Drive North Bridge there was a reduction in average daily traffic by 9,800.

Weekday peak hour analysis was completed for 10 signalized intersection and five unsignalized intersections with the following outcomes:

1. In the short-term, continue to monitor and adjust signal timings at impacted intersections.
2. As part of the North Saskatoon Transportation Study, include an improvement plan for the intersection of Marquis Drive and Idylwyld Drive.
3. Begin stakeholder consultation for the previously identified improvements at the intersection of 51st Street and Millar Avenue.
4. Revisit the previously completed functional planning study for the Circle Drive and Idylwyld Drive interchange once Phase 1 of the Saskatoon Freeway Functional Planning project is complete.
5. Complete an intersection improvement study for the intersections of Attridge Drive and Central Avenue in advance of the Bus Rapid Transit (BRT) project.

6. The intersection of Lowe Road and Nelson Road was discussed during the University Heights Suburban Centre Neighbourhood Traffic Review meeting held in September 2019. Residents supported improving signage and retaining the four-way stop in the short term. Long term the intersection will be placed on the prioritization list for intersections to be signalized.
7. Adjust lane designations (i.e. signs and pavement markings) at the intersection of Kerr Road and Kenderdine Road.

Detailed analysis and discussion is provided in the accompanying document Chief Mistawasis Bridge Traffic Impact Assessment.

IMPLICATIONS

There are no legal, social, or environmental implications identified. The financial implication of future geometric improvements will be identified during the completion of the appropriate engineering reviews and reported in the future.

NEXT STEPS

Traffic signal timing adjustments and changes to lane designations (i.e. signs and pavement markings) will occur in fall 2019.

Upon completion of the engineering work at the various intersections, the Administration will report back with the recommended geometric improvements and requests for funding through Capital Project #2288 - TU - Transportation Safety as part of future budget deliberations.

APPENDICES

1. Chief Mistawasis Bridge Traffic Impact Assessment

Report Approval

Written by:	Justine Marcoux, Transportation Engineer
Reviewed by:	David LeBoutillier, Engineering Manager, Transportation Jay Magus, Director of Transportation
Approved by:	Terry Schmidt, General Manager, Transportation & Construction Department

2019

Chief Mistawasis Bridge Traffic Assessment



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1. Introduction

The Chief Mistawasis Bridge and the Traffic Bridge opened in October 2018. This report outlines the traffic impacts due to the bridge openings. Assessments are as follows:

- Bridge Traffic Comparisons
- Road Segment Review
- Intersection Analysis

The study locations are illustrated in Figure 1.

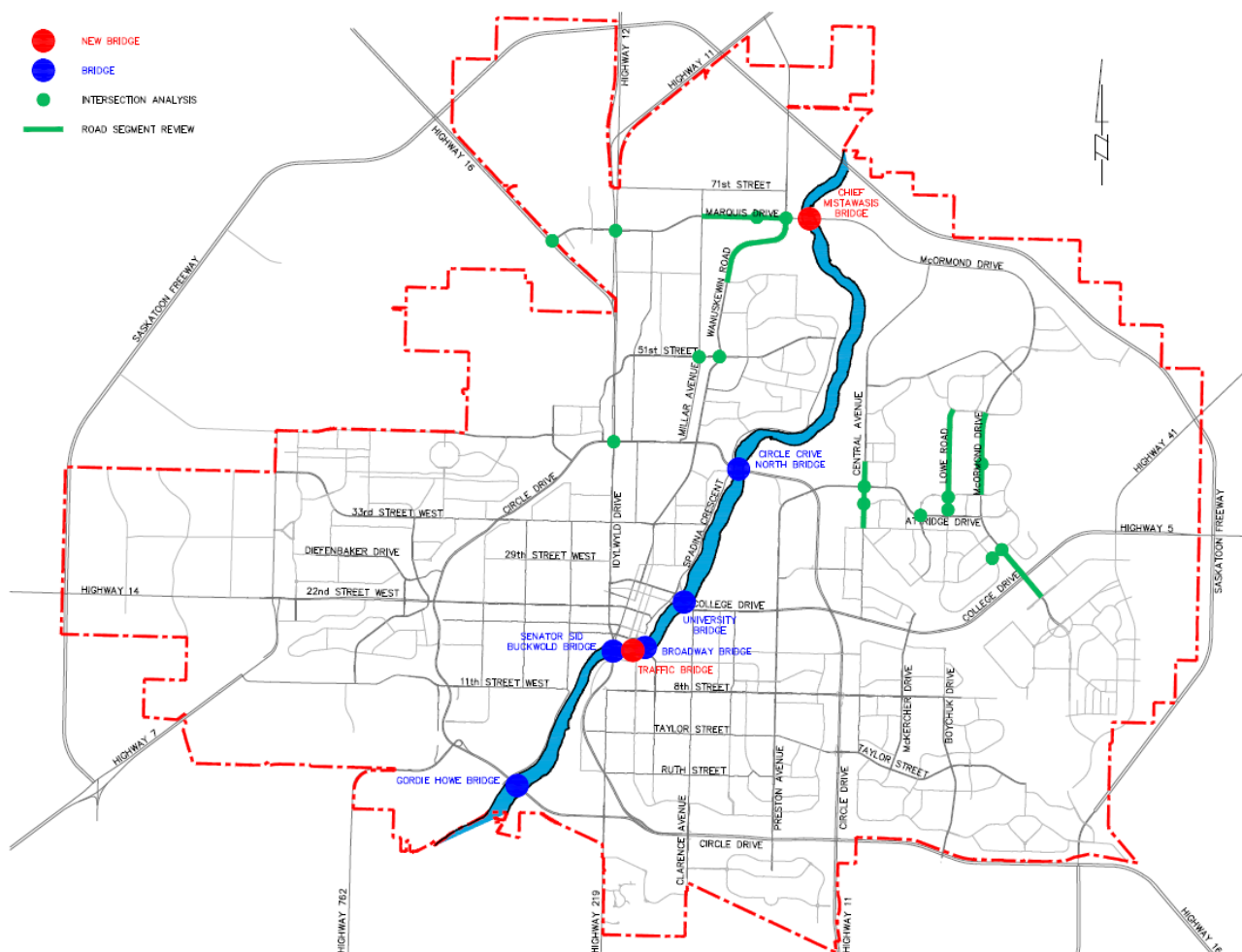


Figure 1: Study Locations

2. Bridge Traffic Comparison

The Average Daily Traffic observed on Saskatoon's bridges is illustrated in Figure 2. The data was collected in early 2019.

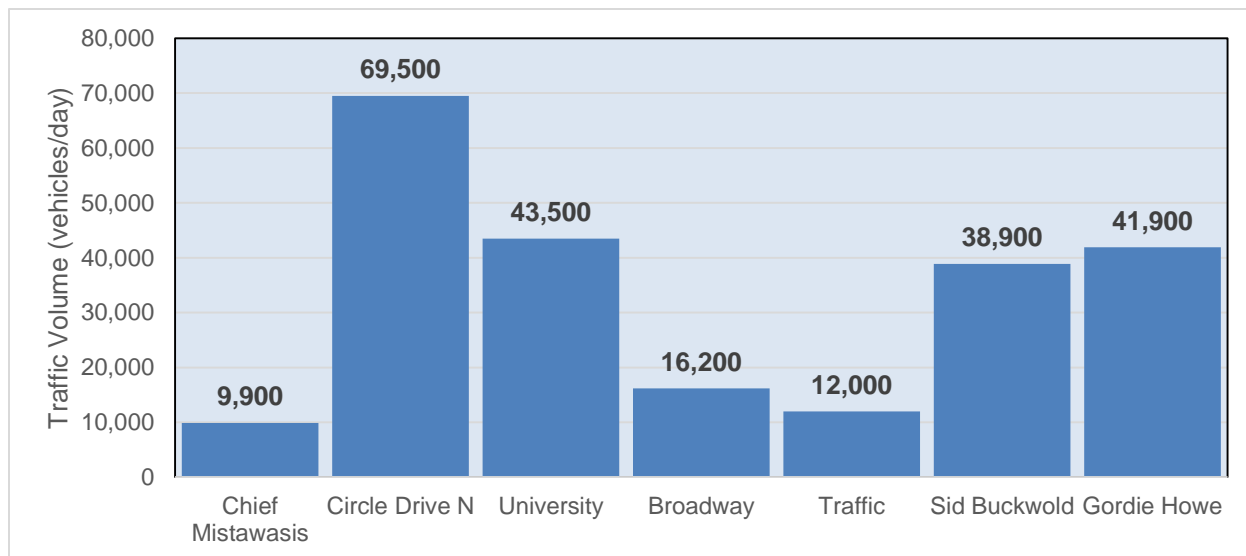


Figure 2: Average Daily Traffic – Bridges

A review of the information presented in the figure above yields the following observations:

- The Chief Mistawasis Bridge has been operating with approximately 10,000 vehicles per day (vpd) since opening, resulting in a reduction of approximately 10,000 vpd on the Circle Drive North Bridge.
- The re-opened Traffic Bridge has been operating at approximately 12,000 vpd. There may be some impact to this volume due to construction on the nearby Sid Buckwold Bridge.
- Traffic volumes on the remaining bridges are relatively unchanged since the opening of the two new bridges.

3. Road Segment Review

The street network is comprised of various street types, each of which performs a particular function in facilitating the way people and goods move through and within the city. The City of Saskatoon street classifications characteristics for the street types included in the study are summarized in Table 1.

Table 1: City of Saskatoon Street Classifications Characteristics

Characteristic	Collectors		Arterials		Expressways/ Freeways
	Residential	Commercial	Minor	Major	
Traffic Service Function	Traffic movement and land access of equal importance		Traffic movement major consideration	Traffic movement primary consideration	Traffic movement primary consideration
Typical Traffic Volume (veh/day)	<5,000	8,000 to 10,000	5,000 to 25,000		>10,000 / >20,000
Traffic Flow Characteristics	Interrupted flow		Uninterrupted flow except at signals and crosswalks		Free-flow (grade separated) Uninterrupted flow except at signals
Typical Posted Speed Limits (kph)	50		50 to 70		80 to 90
Typical Vehicle Type	Passenger and service vehicles	All types	All types	All types, large portion of trucks	All types, large portion of trucks

The before and after Average Daily Traffic volumes for a number of various street segments are presented in Table 2.

Table 2: Road Segment Traffic Changes

Segment	Road Classification	Previous Observations		2019	Change
		Year	AADT	ADT	
Chief Mistawasis Bridge	Major Arterial	-	-	9,900	-
Circle Drive (North) Bridge	Expressway	2018	79,300	69,500	-9,800
University Bridge	Major Arterial	2017	43,100	43,500	+400
Broadway Bridge	Major Arterial	2018	17,900	16,200	-1,700
Traffic Bridge	Commercial Collector	2018	6,100	12,000	+5,900
Sid Buckwold Bridge	Freeway	2017	45,400	38,900	-6,500
Gordie Howe Bridge	Freeway	2018	43,500	41,900	-1,600
Marquis Drive (Millar Avenue – Arthur Rose Avenue)	Major Arterial	2017	5,300	7,800	+2,500
Central Avenue (Attridge Drive – Konihowski Road)	Major Arterial	2015	9,300	13,500	+4,200
Central Avenue (Attridge Drive – 115 th Street)	Major Arterial	2018	11,000	13,200	+2,200
Lowe Road (Nelson Road – Evergreen Boulevard)	Commercial Collector	2016	6,500	5,500	-1,000
McOrmond Drive (Stensrud Road – Baltzan Boulevard)	Major Arterial	2016	7,600	13,200	+5,600
Wanuskewin Road (south of Marquis Drive)	Major Arterial	2016	10,800	9,800	-1,000
McOrmond Drive (Kerr Road – College Drive)	Major Arterial	2016	39,200	25,100	-14,100
McOrmond Drive (South of College Drive)	Major Arterial	New in 2019	-	9,000	-

Note: AADT = Annual Average Daily Traffic, ADT = Average Daily Traffic,

A review of the information presented in the table above yields the following observations:

- In general, the streets directly connected to the new Chief Mistawasis Bridge saw increased daily traffic.
- Previous alternate routes connecting to the Circle Drive North Bridge saw some decreases.

4. Intersection Analysis – Signalized Intersections

The North American traffic engineering standard for measuring the performance of a signalized intersection is to measure the *average delay* in seconds a driver will experience in completing a maneuver. The software used to analyze the intersection calculates an average delay to each movement based on the traffic volumes, permitted movements and signal timing. This average delay corresponds to established Levels of Service (LOS). The LOS can range from A to F (the shorter the average delay the better the LOS, the longer the average delay the worse the LOS). Generally, the City prefers to avoid LOS E and F. However, a LOS E or F does not indicate the need for or trigger improvements. Other considerations include: the traffic volume performing the problematic movement with LOS E or F, intersection geometrics and signal operation, intersection spacing, road classification, availability of alternate routes, pedestrian movements, access management, type of adjacent land use, future development in the area and cost. A summary of the Level of Service characteristics for signalized intersections is provided in Table 3.

Table 3: Level of Service Characteristics (signalized)

Average Control Delay (sec./veh.)	Level of Service	General Description
≤ 10	A	Free Flow
>10 to 20	B	Stable Flow (slight delays)
>20 to 35	C	Stable Flow (acceptable delays)
>35 to 55	D	Approaching unstable flow (tolerable delay, occasional wait through more than one signal cycle before proceeding)
>55 to 80	E	Unstable flow
>80	F	Forced flow

Detailed intersection analysis, including weekday AM and PM peak hours, was completed for the following signalized intersections:

- Marquis Drive and Wanuskewin Drive
- Marquis Drive and Arthur Rose Avenue
- Marquis Drive and Idylwyld Drive
- Marquis Drive and Highway 16
- 51st Street and Warman Road
- 51st Street and Millar Avenue
- Circle Drive and Idylwyld Drive
- Attridge Drive and Central Avenue
- Attridge Drive and Berini Drive
- McOrmond Drive and Kerr Road

A summary of the analysis for each intersection is provided in Table 4. Detailed analysis results for each intersection movement is provided in Appendix 1.

Table 4: Intersection Analysis – Signalized Intersections

Intersection	Weekday AM Peak Hour			Weekday PM Peak Hour		
	Max v/c ratio	Average Delay (s)	LOS	Max v/c ratio	Average Delay (s)	LOS
Marquis Drive and Wanuskewin Drive	0.53	24.6	C	0.8	35.7	D
Marquis Drive and Arthur Rose Avenue	0.63	15.7	B	0.91	23.1	C
Marquis Drive and Idylwyld Drive	1.28	59.9	E	2.29	163.4	F
Marquis Drive and Highway 16	0.62	37.4	D	0.58	32.3	C
51st Street and Warman Road	0.82	38.3	D	1.11	44	D
51st Street and Millar Avenue	0.84	38.7	D	1.83	177.5	F
Circle Drive and Idylwyld Drive	0.72	20.7	C	1.05	55	E
Attridge Drive and Central Avenue	0.88	33	C	0.99	68.2	E
Attridge Drive and Berini Drive	0.83	24	C	0.85	21.4	C
McOrmond Drive and Kerr Road	0.75	18.7	B	0.74	21.4	C

v/c – volume to capacity; LOS – Level of Service

A review of the information provided in the table above and Appendix 1 yield the following observations:

- Marquis Drive and Idylwyld Drive – multiple intersection movements, notably eastbound and westbound movements, provide a poor LOS with significant delays in both AM and PM peak hours.
- 51st Street and Millar Avenue – multiple intersection movements, notably southbound and northbound movements, provide a poor LOS with significant delay mostly in the weekday PM peak hour.
- Circle Drive and Idylwyld Drive – multiple intersection movements, in all directions, provide a poor LOS with significant delay mostly in the weekday PM peak hour.
- Attridge Drive and Central Avenue – multiple intersection movements, in all directions, provide a poor LOS with significant delay mostly in the weekday PM peak hour.

The following is recommended:

- In the short-term, continue to monitor and adjust signal timings at impacted intersections.
- As part of the North Saskatoon Transportation Study include an intersection improvement plan for the intersection of Marquis Drive and Idylwyld Drive.
- Begin stakeholder consultation for the previously identified required improvement at the intersection of 51st Street and Millar Avenue.
- Revisit the previously completed functional planning study for the Circle Drive and Idylwyld Drive interchange once Phase 1 of the Saskatoon Freeway Functional Planning project is complete. More details are provided in Appendix 4.
- Complete an intersection improvement study for the intersections of Attridge Drive and Central Avenue in advance of the Bus Rapid Transit (BRT) project.

5. Intersection Analysis – Unsignalized Intersections

Details of the Level of Service for unsignalized intersections is provided in Table 5.

Table 5: Level of Service Standards (unsignalized)

Average Control Delay (sec./veh.)	Level of Service	General Description
≤ 10	A	Free Flow
>10 to 15	B	Stable Flow (slight delays)
>15 to 25	C	Stable Flow (acceptable delays)
>25 to 35	D	Approaching unstable flow (tolerable delay, occasional wait through more than one signal cycle before proceeding)
>35 to 50	E	Unstable flow
>50	F	Forced flow

Detailed intersection analysis was completed for the following unsignalized intersections:

- McOrmond Drive and Stensrud Road (north)
- Central Avenue and Reid Road/Rossmo Road
- Lowe Road and Nelson Road
- Lowe Road and Ludlow Street
- Kerr Road and Kenderdine Road

A summary of the analysis for each of the unsignalized intersections is provided in Table 6. In addition, assessments were conducted to determine the need for traffic signals in adherence to the Traffic Signal and Pedestrian Signal Head Warrant Handbook. A warrant system assigns points for a variety of conditions including:

- Number of traffic lanes;
- Posted speed limit of the street;
- Distance to the nearest protected traffic signal; and
- Number of pedestrians and vehicles at the location.

Pedestrians and traffic data was collected during the peak hours of 7:00 a.m. to 9:00 a.m., 11:30 a.m. to 1:30 p.m., and 4:00 p.m. to 6:00 p.m. Full details of the intersection analysis for the unsignalized locations are provided in Appendix 2. Traffic Signal Warrants are provided in Appendix 3.

Table 6: Intersection Analysis – Unsignalized Intersections

Intersection	Weekday AM Peak Hour			Weekday PM Peak Hour			Traffic Signal Warrant
	Max v/c ratio	Average Delay (s)	LOS	Max v/c ratio	Average Delay (s)	LOS	
McOrmond Drive and Stensrud Road (north)	0.42	3.3	A	0.52	2.8	A	56 (Traffic Signal NOT warranted)
Central Avenue and Reid Road / Rossmo Road	0.52	5.5	A	1.17	16.5	C	74 (Traffic Signal NOT warranted)
Lowe Road and Nelson Road	0.61	18.9	C	0.63	20.4	C	112 (Traffic Signal warranted)
Lowe Road and Ludlow Street	0.6	4.8	B	0.62	8.7	B	86 (Traffic Signal NOT warranted)
Kerr Road and Kenderdine Road	0.44	9.8	A	1.02	37.1	E	66 (Traffic Signal NOT warranted)

A review of the information provided in Table 5, Table 6, Appendix 2 and Appendix 3 yield the following observations:

- Traffic signals are not warranted at the intersection of McOrmond Drive and Stensrud Road (north), the intersection of Central Avenue and Reid Road/ Rossmo Road, the intersection of Lowe Road and Ludlow Street.
- Traffic signals are warranted at the intersection of Lowe Road and Nelson Road.
- At the intersection of Kerr Road and Kenderdine Road there is a poor LOS for the southwest bound movement in the weekday PM peak hour.

The following is recommended:

- Place the intersection of Lowe Road and Nelson Road on the prioritization list for intersections to be signalized.
- Adjust lane designations (i.e. signs and pavement markings) at the intersection of Kerr Road and Kenderdine Road.

6. Summary

6.1 Bridge Traffic Comparison

The Chief Mistawasis Bridge has been operating with approximately 10,000 vpd, resulting in a reduction of approximately 10,000 vpd on the Circle Drive North Bridge. The Traffic Bridge has been operating at approximately 12,000 vpd. There may be some impact to the volume due to construction of the nearby Sid Buckwold Bridge.

Traffic volumes on the remaining bridges are relatively unchanged since the opening of the two new bridges.

6.2 Road Segment Review

In general, the streets directly connected to the new Chief Mistawasis Bridge saw increased daily traffic, and previous alternate routes connecting to the Circle Drive North Bridge saw some decreases.

6.3 Intersection Recommendations

The following is recommended:

1. In the short-term, continue to monitor and adjust signal timings at impacted intersections.
2. As part of the North Saskatoon Transportation Study include an intersection improvement plan for the intersection of Marquis Drive and Idylwyld Drive.
3. Begin stakeholder consultation for the previously identified required improvement at the intersection of 51st Street and Millar Avenue.
4. Revisit the previously completed functional planning study for the Circle Drive and Idylwyld Drive interchange once Phase 1 of the Saskatoon Freeway Functional Planning project is complete.
5. Complete an intersection improvement study for the intersections of Attridge Drive and Central Avenue in advance of the BRT project.
6. Place the intersection of Lowe Road and Nelson Road on the prioritization list for intersections to be signalized.
7. Adjust lane designations (i.e. signs and pavement markings) at the intersection of Kerr Road and Kenderdine Road.

Appendix 1: Intersection Analysis – Signalized Intersections

Marquis Drive and Wanuskewin Drive

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.49	35.2	D	45.8	0.74	57.5	E	77.7
	Thru	0.53	28.5	C	56.8	0.29	25.6	C	45.0
	RT	0.27	4.0	A	9.1	0.05	0.2	A	0
NB	LT	0.32	33.0	C	28.4	0.31	51.9	D	23.6
	Thru	0.32	30.8	C	24.8	0.80	43.7	D	99.0
	RT	0.08	0.4	A	0	0.34	6.8	A	16.5
EB	LT	0.06	34.9	C	6.7	0.27	39.0	D	26.1
	Thru	0.11	26.2	C	13.2	0.70	39.2	D	94.6
	RT	0.03	0.1	A	0	0.05	0.1	A	0
WB	LT	0.24	34.9	C	17.9	0.20	49.1	D	13.3
	Thru	0.51	24.9	C	71.0	0.26	41.3	D	23.7
	RT	0.22	2.7	A	6.3	0.38	5.8	A	10.6
Intersection Summary		Max 0.53	Average 24.6	C	-	Max 0.80	Average 35.7	D	-

Marquis Drive and Arthur Rose Avenue

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT/Thru/RT	0.05	5.1	A	5.1	0.10	6.4	A	7.9
NB	LT/Thru/RT	0.29	10.9	B	22.9	0.24	8.6	A	16.2
EB	LT	0.54	29.6	C	21.1	0.09	12.9	B	7.0
	Thru/RT	0.23	7.2	A	10.7	0.91	28.7	C	88.2
WB	LT	0.14	13.6	B	8.5	0.34	21.7	C	11.1
	Thru/RT	0.69	19.0	B	46.8	0.20	13.0	B	15.5
Intersection Summary		Max 0.63	Average 15.7	B	-	Max 0.91	Average 23.1	C	-

Marquis Drive and Idylwyld Drive

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.88	100.9	F	144.6	0.86	9104.1	F	125.0
	Thru	0.85	40.8	D	322.7	0.59	31.6	C	188.6
	RT	0.08	0.9	A	2.4	0.11	3.0	A	9.1
NB	LT	0.47	87.2	F	32.1	0.68	90.3	F	52.2
	Thru	0.43	36.2	D	113.8	1.09	93.7	F	436.7
	RT	0.34	4.2	A	19.8	0.16	5.2	A	14.1
EB	LT	0.30	52.7	D	35.3	1.00	113.8	F	130.4
	Thru	1.28	204.1	F	232.9	2.29	617.5	F	477.8
	RT	1.28	204.1	F	232.9	2.29	617.5	F	477.8
WB	LT	0.56	62.5	E	46.4	0.82	87.3	F	76.1
	Thru	0.58	67.0	E	72.5	1.31	198.0	F	191.4
	RT	0.58	67.0	E	72.5	1.31	198.0	F	191.4
Intersection Summary		Max 1.28	Average 59.9	E	-	Max 2.29	Average 163.4	F	-

Marquis Drive and Highway 16

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.62	51.6	D	57.1	0.47	48.7	D	37.2
	Thru	0.53	36.0	C	73.0	0.33	28.4	C	58.9
	RT	0.53	36.0	C	73.0	0.33	28.4	C	58.9
NB	LT	0.36	42.5	D	37.1	0.17	41.2	D	17.1
	Thru	0.28	32.8	C	39.5	0.51	33.7	C	69.1
EB	LT/Thru/RT	0.56	46.4	D	51.0	0.58	40.3	D	48.1
WB	LT	0.17	43.1	D	17.8	0.30	43.0	D	28.3
	Thru	0.44	48.8	D	40.1	0.46	46.4	D	41.0
	RT	0.26	1.7	A	0	0.54	11.5	B	21.0
Intersection Summary		Max 0.62	Average 37.4	D	-	Max 0.58	Average 32.3	C	-

51st Street and Warman Road

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.36	60.2	E	29.1	0.68	49.0	D	51.3
	Thru	0.82	54.8	D	114.6	0.75	57.1	E	118.0
	RT	0.65	21.2	C	63.9	0.41	7.8	A	22.1
NB	LT	0.75	53.0	D	87.7	0.71	64.4	E	78.4
	Thru	0.39	29.0	C	67.9	0.81	52.1	D	153.5
	RT	0.19	1.9	A	5.9	0.68	23.5	C	91.5
EB	LT	0.46	32.2	C	41.9	0.71	17.0	B	42.4
	Thru	0.36	30.8	C	34.8	0.60	26.8	C	105.0
	RT	0.36	30.8	C	34.8	1.11	69.0	E	201.1
WB	LT	0.64	34.1	C	73.7	0.62	36.1	D	48.7
	Thru	0.51	38.3	D	79.5	0.33	40.9	D	66.3
	RT	0.51	38.3	D	79.5	0.24	2.3	A	5.0
Intersection Summary		Max 0.82	Average 38.3	D	-	Max 1.11	Average 44.0	D	-

51st Street and Millar Avenue

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.78	52.7	D	86.2	1.83	412.9	F	279.5
	Thru								
	RT								
NB	LT	0.84	60.4	E	95.2	2.05	326.3	F	184.8
	Thru								
	RT								
EB	LT	0.84	64.4	E	78.2	0.62	36.3	D	44.4
	Thru	0.35	32.6	C	50.4	0.93	57.5	E	193.5
	RT	0.35	32.6	C	50.4	0.93	57.5	E	193.5
WB	LT	0.53	15.0	B	36.8	0.62	46.8	D	48.4
	Thru	0.81	27.1	C	135.5	0.54	54.3	D	114.3
	RT	0.81	27.1	C	135.5	0.54	54.3	D	114.3
Intersection Summary		Max 0.84	Average 38.7	D	-	Max 1.83	Average 177.5	F	-

Circle Drive and Idylwyld Drive

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.65	65.1	E	64.4	0.63	60.7	E	73.8
	RT	0.24	1.7	A	0	0.53	20.8	C	36.5
NB	LT	0.72	86.1	F	52.2	0.72	76.4	E	75.6
	RT	0.62	34.4	C	36.7	0.67	41.8	D	56.4
EB	LT	0.60	59.9	E	78.5	0.53	62.7	E	74.6
	Thru	0.58	4.5	A	52.6	0.68	18.0	B	42.5
	RT	0.71	10.5	B	45.6	0.68	18.0	B	42.5
WB	LT	0.63	66.2	E	52.3	0.70	49.9	E	48.8
	Thru	0.61	27.1	C	60.0	1.05	71.1	F	177.0
	RT	0.61	27.1	C	60.0	1.05	71.1	F	177.0
Intersection Summary		Max 0.72	Average 20.7	C	-	Max 1.05	Average 55.0	E	-

Attridge Drive and Central Avenue

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.10	62.2	E	12.4	0.42	88.5	F	68.3
	Thru	0.43	67.6	E	32.2	0.53	87.2	F	77.8
	RT	0.71	2.8	A	0	0.85	25.0	C	73.7
NB	LT	0.83	80.0	E	121.2	0.75	100.9	F	143.4
	Thru	0.80	66.7	E	97.1	0.74	87.4	E	124.4
	RT	0.80	66.7	E	97.1	0.74	87.4	D	124.4
EB	LT	0.68	74.9	E	37.0	0.81	80.2	F	193.1
	Thru	0.36	23.9	C	84.4	0.99	72.9	E	578.4
	RT	0.19	3.6	A	13.1	0.92	54.2	D	457.8
WB	LT	0.20	54.3	D	7.7	0.32	82.1	F	58.5
	Thru	0.88	33.0	C	290.4	0.79	65.4	E	325.3
	RT	0.05	0.1	A	0	0.08	5.0	A	5.8
Intersection Summary		Max 0.88	Average 33.0	C	-	Max 0.99	Average 68.2	E	-

Attridge Drive and Berini Drive

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.43	45.6	D	20.8	0.28	52.3	D	16.6
	Thru	0.59	18.7	B	23.1	0.46	22.1	C	17.4
	RT	0.59	18.7	B	23.1	0.46	22.1	C	17.4
NB	LT	0.83	51.1	D	53.3	0.51	42.0	D	41.0
	Thru	0.25	24.3	C	25.7	0.05	33.0	C	7.9
	RT	0.16	4.4	A	25.7	0.28	7.8	A	14.2
EB	LT	0.56	21.6	C	29.7	0.36	9.6	A	16.8
	Thru	0.50	19.7	B	72.7	0.85	27.8	C	207.8
	RT	0.50	19.7	B	72.7	0.85	27.8	C	207.8
WB	LT	0.22	10.4	B	12.5	0.48	34.4	C	18.9
	Thru	0.83	26.8	C	150.6	0.51	9.1	A	75.2
	RT	0.20	3.3	A	6.1	0.51	0.2	A	0.2
Intersection Summary		Max 0.83	Average 24.0	C	-	Max 0.85	Average 21.4	C	-

McOrmond Drive and Kerr Road/Stensrud Road

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB (McOrmond Dr)	LT	0.12	12.2	B	10.2	0.46	16.8	B	25.4
	Thru	0.59	26.5	C	76.1	0.61	34.1	C	104.4
	RT	0.08	0.2	A	0	0.25	7.4	A	16.9
NB (McOrmond Dr)	LT	0.36	14.6	B	20.8	0.74	22.2	C	106.1
	Thru	0.38	21.6	C	51.1	0.58	19.7	B	119.4
	RT	0.18	4.6	A	10.7	0.48	5.1	A	33.8
EB (Kerr Rd)	LT	0.19	19.4	B	21.9	0.27	34.1	C	28.6
	Thru	0.05	17.5	B	9.8	0.16	31.6	C	23.4
	RT	0.53	4.3	A	18.4	0.47	6.7	A	19.1
WB (Stensrud Rd)	LT	0.75	34.2	C	94.2	0.72	48.8	D	72.4
	Thru	0.06	17.6	B	10.9	0.14	31.4	C	21.5
	RT	0.27	4.0	A	12.5	0.23	5.9	A	10.4
Intersection Summary		Max 0.75	Average 18.7	B	-	Max 0.74	Average 21.4	C	-

Appendix 2: Intersection Analysis – Unsignalized Intersections

McOrmond Drive and Stensrud Road (north intersection)

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.02	8.3	A	0.6	0.09	9.8	A	2.2
	Thru	0.17	0	A	0	0.24	0	A	0
NB	Thru	0.12	0	A	0	0.24	0	A	0
	RT	0.02	0	A	0	0.08	0	A	0
WB	LT	0.42	23.8	C	15.3	0.52	59.9	F	18.7
	RT	0.09	10.0	A	2.3	0.11	11.7	B	2.8
Intersection Summary		Max 0.42	Average 3.3	A	-	Max 0.52	Average 2.8	A	-

Central Avenue and Reid Road/Rossmo Road

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT/Thru	0.03	1.1	A	0.7	0.18	4.2	A	4.9
	RT	0.03	0	A	0	0.07	0	A	0
NB	LT/Thru/RT	0.01	0.2	A	0.2	0.05	1.2	A	1.1
EB	LT/Thru/RT	0.52	44.8	E	20.1	1.17	251.6	F	50.4
WB	LT/Thru/RT	0.28	16.3	C	8.6	0.36	33.0	D	50.4
Intersection Summary		Max 0.52	Average 5.5	A	-	Max 1.17	Average 16.5	C	-

Lowe Road and Nelson Road

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT/Thru/RT	NA	24.7	C	NA	NA	15.7	C	NA
NB	LT/Thru/RT	NA	14.2	B	NA	NA	26.1	D	NA
EB	LT/Thru/RT	NA	14.7	B	NA	NA	12.7	B	NA
WB	LT/Thru/RT	NA	16.9	C	NA	NA	19.3	C	NA
Intersection Summary		0.61	18.9	C	NA	0.63	20.4	C	NA

Lowe Road and Ludlow Street

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	All movements	0.02	0.6	A	0	0.04	1.3	A	1
NB	LT / Thru	0.16	5.0	A	4	0.01	0.3	A	0
	RT	0.07	0	A	0	0.09	0	A	0
EB	All movements	0.11	13.4	B	3	0.07	12.9	B	2
WB	All movements	0.34	36.8	E	10	0.71	45.6	E	37
Intersection Summary		0.60	4.8	B	NA	0.62	8.7	B	NA

Kerr Road and Kenderdine Road

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SEB (Kenderdine Rd)	LT/Thru/RT	0.10	9.0	A	-	0.34	13.5	B	-
NWB (Kenderdine Rd)	LT/Thru/RT	0.44	10.8	B	-	0.42	13.8	B	-
NEB (Kerr Rd)	LT	0.18	8.8	A	-	0.21	10.7	B	-
	Thru/RT	0.18	8.7	A	-	0.20	10.4	B	-
SWB (Kerr Rd)	LT/Thru	0.17	9.2	A	-	1.02	68.3	F	-
	RT	0.02	7.1	A	-	0.10	8.1	A	-
Intersection Summary		Max 0.44	Average 9.8	A	-	Max 1.02	Average 37.1	E	-

Appendix 3: Traffic Signal Warrants

McOrmond Drive and Stensrud Road (north intersection)

Main Street (name)	McOrmond Dr	Direction (EW or NS)	NS	Road Authority:	City of Saskatoon
Side Street (name)	Stensrud (north)	Direction (EW or NS)	EW	City:	Saskatoon
Quadrant / Int #		Comments		Analysis Date:	2019 Sep 11, Wed
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET			Count Date:	2019 Apr 18, Thu
				Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	Upstream Signal (m)	# of Tmo Lanes
McOrmond Dr	NB			2		1			3
McOrmond Dr	SB	1		2					2
Stensrud (north)	WB	1					1		
Stensrud (north)	EB								

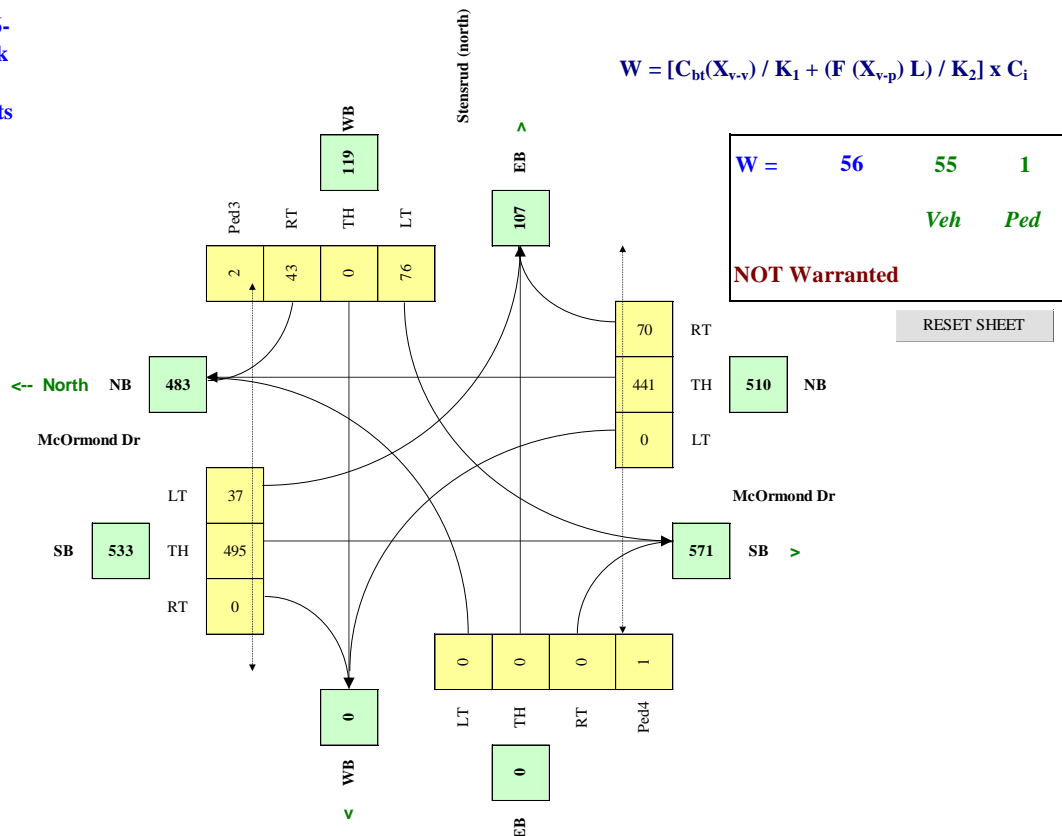
Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	250,000
Central Business District	(y/n)	n

Other input		Speed (Kmh)	Truck %	Bus Rt (y/n)	Median (m)
McOrmond Dr	NS	50	2.0%	y	5.0
Stensrud (north)	EW	50	2.0%	y	

Set Peak Hours												Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
Traffic Input		NB		SB		WB		EB				W Side	E Side	N Side	S Side
		LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th
7:00 - 8:00		361	16	16	475	97	73							4	1
8:00 - 9:00		346	52	33	519	118	38							3	1
11:30 - 12:30		313	64	22	359	50	27							1	
12:30 - 13:30		311	52	20	345	62	22							4	
4:00 - 5:00		601	125	64	645	67	61								
5:00 - 6:00		711	109	69	628	61	35								2
Total (6-hour peak)	0	2,643	418	224	2,971	0	455	0	256	0	0	0	0	12	4
Average (6-hour peak)	0	441	70	37	495	0	76	0	43	0	0	0	0	2	1

Average 6-hour Peak
Turning
Movements

$$W = [C_{bt}(X_{v-v}) / K_1 + (F(X_{v-p}) L) / K_2] \times C_i$$



Chief Mistawasis Bridge Traffic AssessmentAppend 1 - Chief Mistawasis Bridge Traffic Assessment.docx

Central Avenue and Reid Road/Rossmo Road

Main Street (name)	Central Ave	Direction (EW or NS)	NS
Side Street (name)	Reid Rd/Rossmo Rd	Direction (EW or NS)	EW
Quadrant / Int #		Comments	
for Warrant Calculation Results, please hit 'Page Down'			
CHECK SHEET			

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2019 Sep 11, Wed
Count Date:	2019 Apr 30, Tue
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT-LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Central Ave NB			1			1			2
Central Ave SB			1				1		1
Reid Rd/Rossmo Rd WB					1				
Reid Rd/Rossmo Rd EB					1				

Are the Reid Rd/Rossmo Rd WB right turns significantly impeded by through movements? (y/n) n

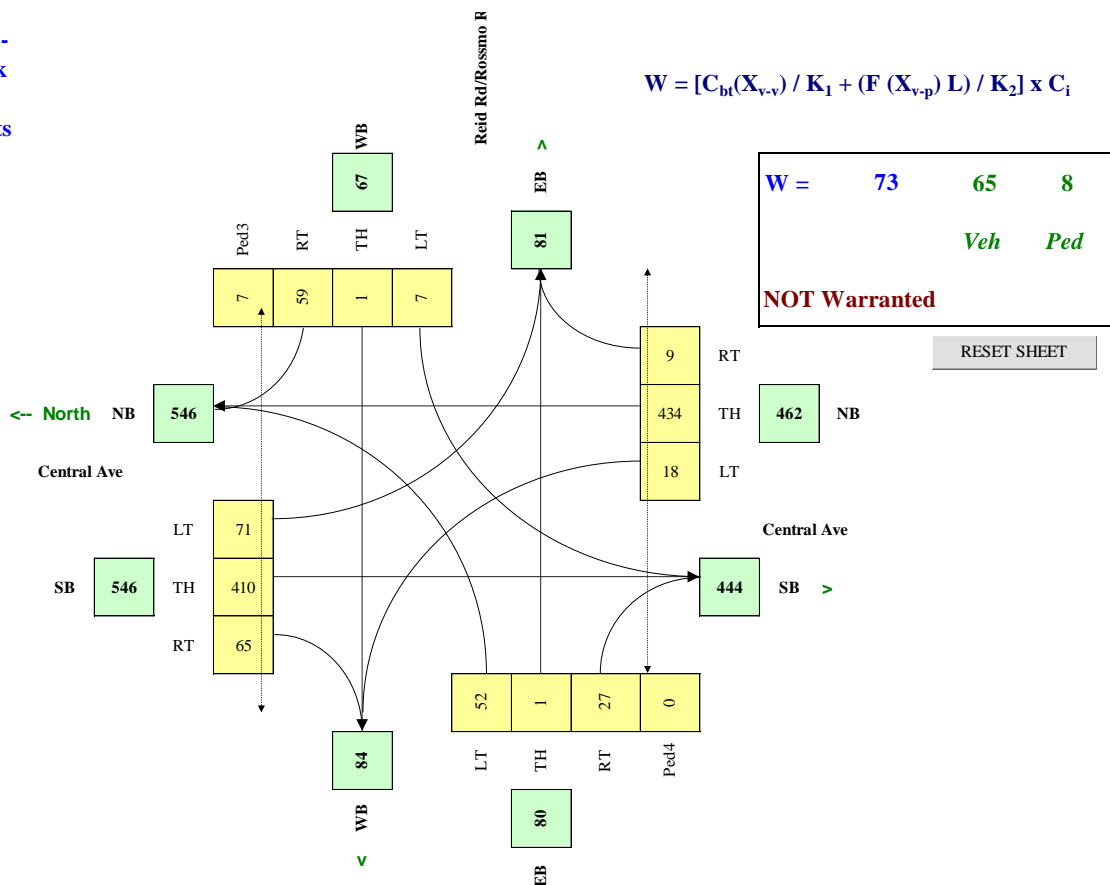
Are the Reid Rd/Rossmo Rd EB right turns significantly impeded by through movements? (y/n) n

Other input		Speed (Kmh)	Truck %	Bus Rt (y/n)	Median (m)
Central Ave	NS	50	2.0%	y	
Reid Rd/Rossmo Rd	EW	50	2.0%	y	

Set Peak Hours													Ped1	Ped2	Ped3	Ped4
Traffic Input													NS	NS	EW	EW
NB				SB			WB			EB			W Side	E Side	N Side	S Side
LT	Th	RT		LT	Th	RT	LT	Th	RT	LT	Th	RT				
7:00 - 8:00	6	465	3	8	178	15	4	0	90	74	0	26	8	3	6	2
8:00 - 9:00	13	528	5	28	266	48	6	0	96	56	2	28	3	3	12	
11:30 - 12:30	15	402	9	44	366	59	9	1	27	48	1	17	1	4	6	
12:30 - 13:30	17	360	10	45	372	40	7	2	50	46	1	16	4	0	3	
4:00 - 5:00	29	387	12	136	628	121	7	0	36	43	1	32	1	5	7	
5:00 - 6:00	28	464	16	165	647	107	10	2	57	46	0	44	2	2	6	
Total (6-hour peak)	108	2,606	55	426	2,457	390	43	5	356	313	5	163	19	17	40	2
Average (6-hour peak)	18	434	9	71	410	65	7	1	59	52	1	27	3	3	7	0

Average 6-hour Peak Turning Movements

$$W = [C_{bt}(X_{v,v}) / K_1 + (F(X_{v,p}) L) / K_2] \times C_i$$



Chief Mistawasis Bridge Traffic AssessmentAppend 1 - Chief Mistawasis Bridge Traffic Assessment.docx

Lowe Road and Nelson Road

Main Street (name)	Nelson	Direction (EW or NS)	EW
Side Street (name)	Lowe	Direction (EW or NS)	NS
Quadrant / Int #		Comments	
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET		

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2019 Aug 27, Tue
Count Date:	2019 Apr 16, Tue
Date Entry Format:	(yyyy-mm-dd)

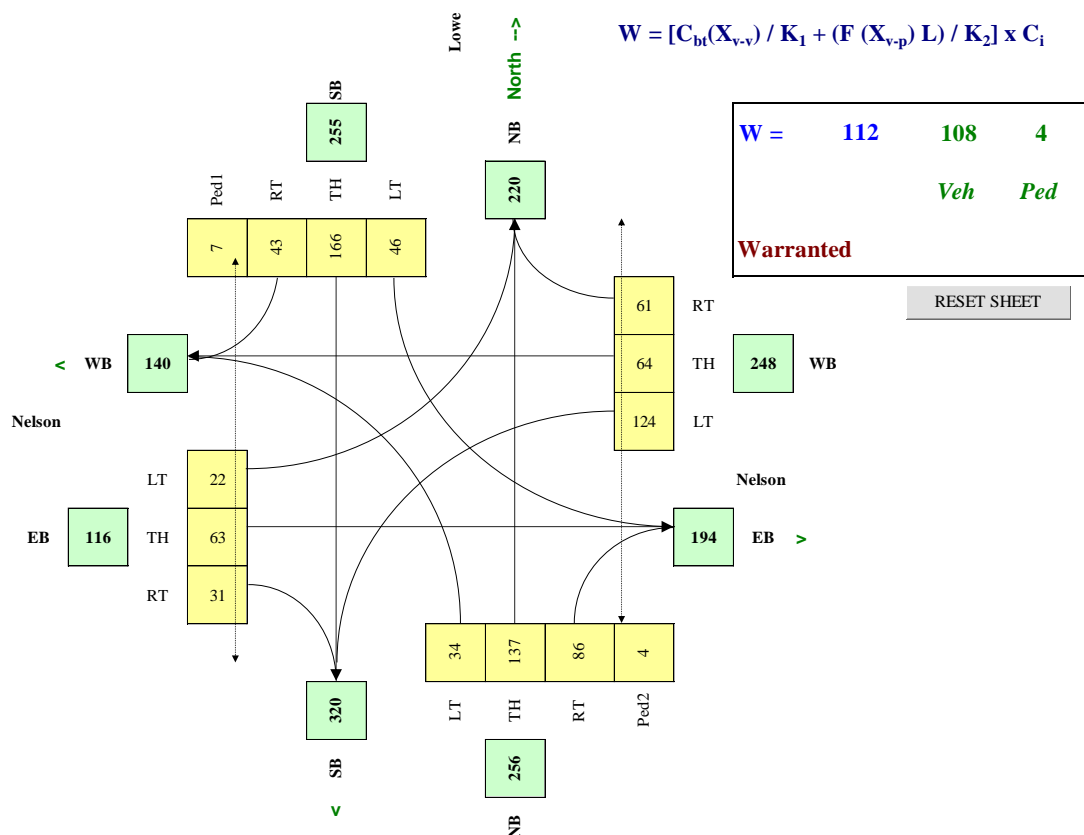
Lane Configuration		Excl LT	Th & LT	Through	Th+RT-LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Nelson	WB				1				1
Nelson	EB				1				1
Lowe	NB				1				
Lowe	SB				1				

Are the Lowe NB right turns significantly impeded by through movements? (y/n) n
Are the Lowe SB right turns significantly impeded by through movements? (y/n) n

Other input		Speed (Kmh)	Truck %	Bus Rt (y/n)	Median (m)
Nelson	EW	50	20.0%	y	
Lowe	NS	50	10.0%	y	

Set Peak Hours													Ped1	Ped2	Ped3	Ped4
Traffic Input													NS	NS	EW	EW
	NB			SB			WB			EB			W Side	E Side	N Side	S Side
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT				
7:00 - 8:00	13	48	21	45	215	27	76	37	18	4	19	7	3	3	4	3
8:00 - 9:00	68	80	61	41	226	142	100	134	27	38	107	72	6	1	8	43
11:30 - 12:30	21	130	94	44	125	9	119	32	56	28	71	39	10	4	22	10
12:30 - 13:30	38	105	93	34	151	32	173	74	58	14	46	25	11	6	21	22
4:00 - 5:00	22	223	125	60	132	15	125	44	90	37	66	15	4	6	23	14
5:00 - 6:00	41	235	120	49	148	32	149	60	115	13	68	25	9	4	27	17
Total (6-hour peak)	203	821	514	273	997	257	742	381	364	134	377	183	43	24	105	109
Average (6-hour peak)	34	137	86	46	166	43	124	64	61	22	63	31	7	4	18	18

Average 6-hour Peak Turning Movements



Chief Mistawasis Bridge Traffic AssessmentAppend 1 - Chief Mistawasis Bridge Traffic Assessment.docx

Lowe Road and Ludlow Street

Main Street (name)	Low Rd	Direction (EW or NS)	NS
Side Street (name)	Ludlow St	Direction (EW or NS)	EW
Quadrant / Int #		Comments	
for Warrant Calculation Results, please hit 'Page Down'			
CHECK SHEET			

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2019 Sep 11, Wed
Count Date:	2019 Apr 17, Wed
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT-LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Low Rd	NB		1				1		1
Low Rd	SB				1				1
Ludlow St	WB				1				
Ludlow St	EB				1				

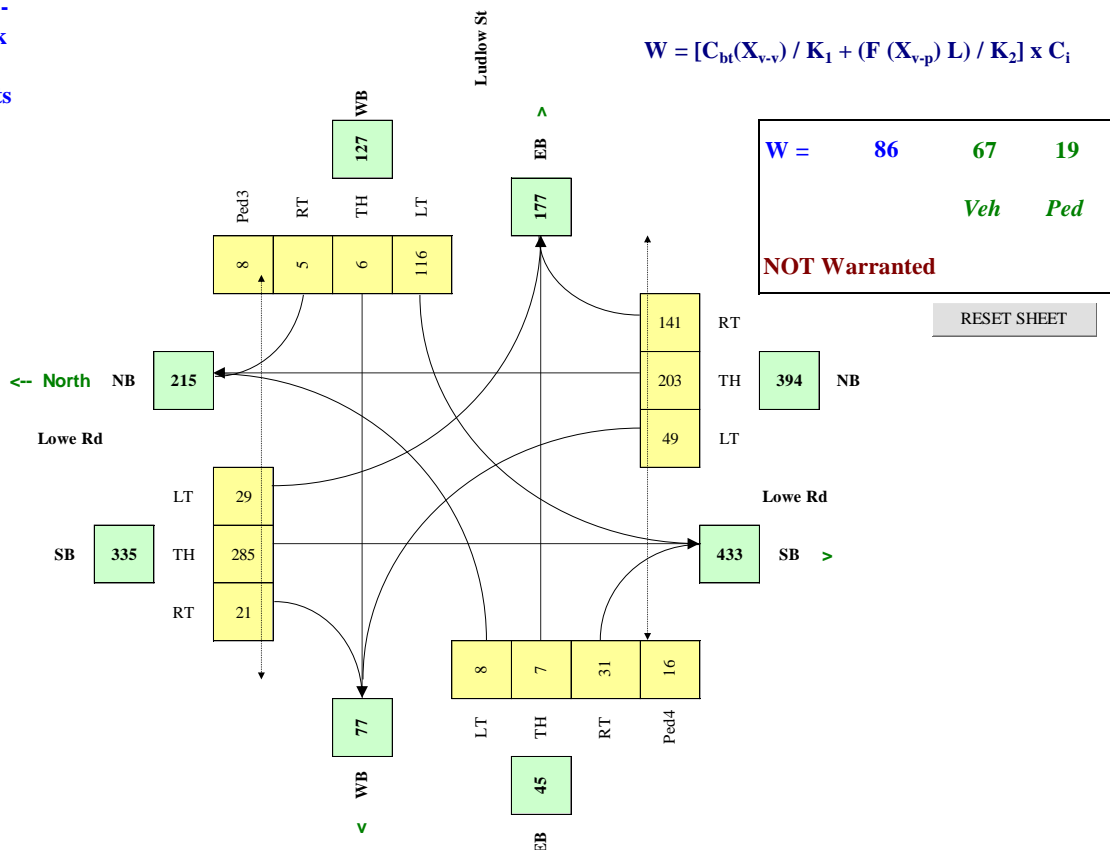
Are the Ludlow St WB right turns significantly impeded by through movements? (y/n) n
Are the Ludlow St EB right turns significantly impeded by through movements? (y/n) y

Other input		Speed (Kmh)	Truck %	Bus Rt (y/n)	Median (m)
Low Rd	NS	50	2.0%	y	0.0
Ludlow St	EW	50	2.0%	n	

Set Peak Hours																		Ped1	Ped2	Ped3	Ped4
Traffic Input	NB			SB			WB			EB			NS	NS	EW	EW					
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side					
7:00 - 8:00	11	74	84	16	301	2	48	1	0	0	0	4	4	2	1	2					
8:00 - 9:00	165	185	107	19	325	56	47	4	3	2	5	43	4	2	1	6					
11:30 - 12:30	17	171	156	32	252	4	143	10	8	16	6	61	15	3	11	15					
12:30 - 13:30	70	173	195	42	289	47	148	18	7	13	18	37	26	10	25	67					
4:00 - 5:00	11	285	170	28	263	2	180	1	4	8	5	22	21	6	6	3					
5:00 - 6:00	21	331	135	39	280	15	132	4	5	6	5	20	1	8	1	2					
Total (6-hour peak)	295	1,219	847	176	1,710	126	698	38	27	45	39	187	71	31	45	95					
Average (6-hour peak)	49	203	141	29	285	21	116	6	5	8	7	31	12	5	8	16					

Average 6-hour Peak Turning Movements

$$W = [C_{bt}(X_{v,v}) / K_1 + (F(X_{v,p}) L) / K_2] \times C_i$$



Chief Mistawasis Bridge Traffic AssessmentAppend 1 - Chief Mistawasis Bridge Traffic Assessment.docx

Kerr Road and Kenderdine Road

Main Street (name)	Kerr	Direction (EW or NS)	EW
Side Street (name)	Kenderdine	Direction (EW or NS)	NS
Quadrant / Int #		Comments	
for Warrant Calculation Results, please hit 'Page Down'			
CHECK SHEET			

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2019 Sep 11, Wed
Count Date:	2019 Jul 09, Tue
Date Entry Format:	(yyyy-mm-dd)

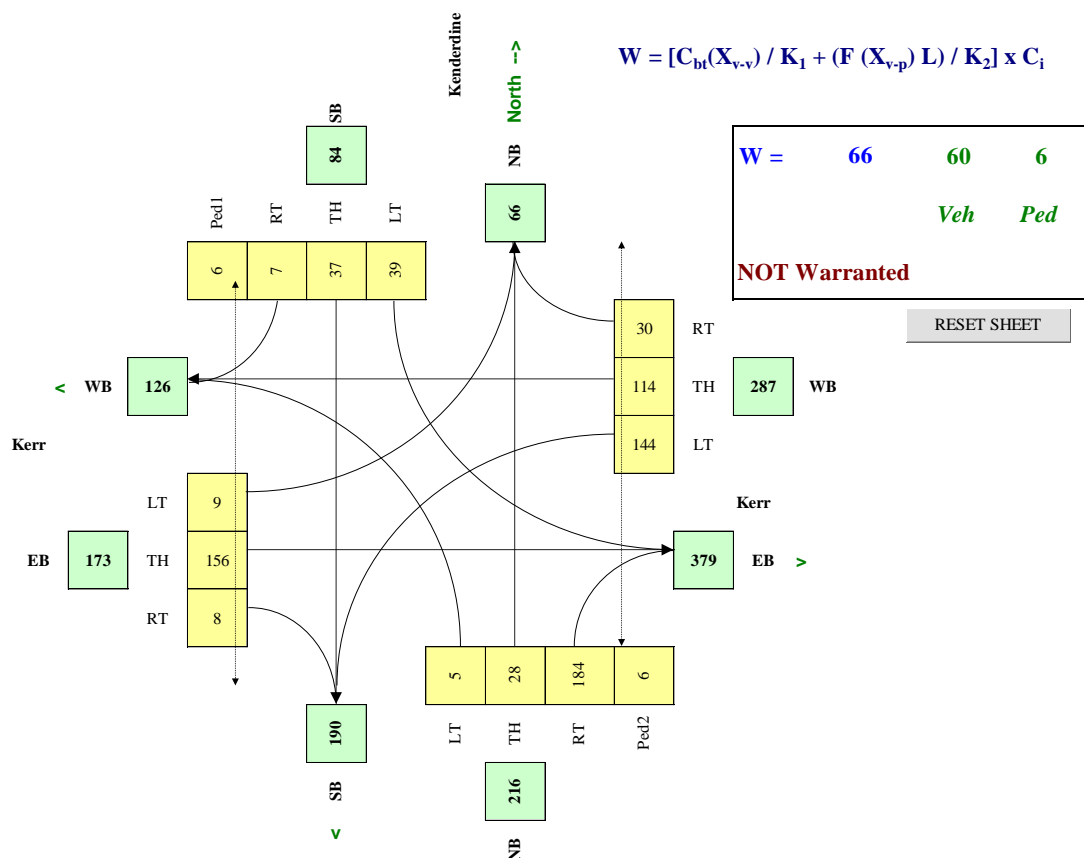
Lane Configuration		Excl LT	Th & LT	Through	Th+RT-LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Kerr	WB		1				1		1
Kerr	EB		1			1			2
Kenderdine	NB				1				
Kenderdine	SB				1				

Are the Kenderdine NB right turns significantly impeded by through movements? (y/n) y
Are the Kenderdine SB right turns significantly impeded by through movements? (y/n) n

Other input		Speed (Kmh)	Truck %	Bus Rt (y/n)	Median (m)
Kerr	EW	50	2.0%	y	0.0
Kenderdine	NS	50	2.0%	n	

Set Peak Hours													Ped1 NS	Ped2 NS	Ped3 EW	Ped4 EW
Traffic Input													W Side	E Side	N Side	S Side
	NB			SB			WB			EB						
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT				
7:00 - 8:00	5	25	297	40	10	2	38	39	10	4	183	6	9	2	6	3
8:00 - 9:00	5	32	220	28	18	3	69	57	18	9	183	3	8	4	5	
11:30 - 12:30	3	23	114	32	30	10	122	102	30	9	110	8	5	3	7	
12:30 - 13:30	6	8	158	32	26	11	111	98	15	9	165	8	5	5	12	2
4:00 - 5:00	7	32	149	37	67	14	242	196	49	14	150	12	2	6	8	
5:00 - 6:00	3	46	165	65	73	3	283	190	55	9	146	12	9	14	6	
Total (6-hour peak)	29	166	1,103	234	224	43	865	682	177	54	937	49	38	34	44	5
Average (6-hour peak)	5	28	184	39	37	7	144	114	30	9	156	8	6	6	7	1

Average 6-hour Peak Turning Movements



Appendix 4: Circle Drive and Idylwyld Drive Interchange

Background:

In August 2010, the City of Saskatoon retained Hatch Mott MacDonald to review the design of the Idylwyld Drive/Circle Drive interchange in an effort to identify opportunities to improve its operation and function, as well as the operation and function of the Circle Drive North corridor between Millar Avenue and Avenue C.

The Administration brought a report to the Planning and Operations Committee on March 6, 2012 recommending:

1. “That the Idylwyld Drive – Circle Drive Functional Design Study – Final Report be approved in principle; and
2. That the Administration report further with respect to the funding and/or timing of the implementation of the recommendations from the Idylwyld Drive – Circle Drive Functional Design Study – Final Report.”

The Administration proposed the following course of action:

1) That the Administration continue to work with the Province on the development of the Saskatoon Freeway as the preferred commercial vehicle route (to address capacity issues related to truck movements at this interchange).

- The functional planning study is currently underway.

2) That the Administration investigate the potential to improve the Warman Road and 51st Street corridors as a means to relieve the operational problems at the interchange and along the corridor.

- The intersection of Warman Road and 51st Street was improved in 2016.
- The functional planning study for intersection improvements at 51st Street and Millar Avenue will begin stakeholder engagement in 2020.

3) That the Administration create a capital budget submission to undertake short term ramp improvements at the interchange.

- This work was delayed to wait for the opening of the Chief Mistawasis Bridge.

4) That the Administration undertake further investigations into the design of a “Single Point Urban Interchange” at this location.

- This work was delayed to wait for the opening of the Chief Mistawasis Bridge. Table A4-1 illustrates the LOS with existing traffic volumes.

Table A4-1: Circle Drive and Idylwyld Drive – Single Point Urban Interchange

Movement		Weekday AM Peak Hour				Weekday PM Peak Hour			
		v/c ratio	Delay (s)	LOS	Queue (m)	v/c ratio	Delay (s)	LOS	Queue (m)
SB	LT	0.74	48.5	D	40.8	0.86	59.3	E	53.5
	Thru	-	-	-	-	-	-	-	-
	RT	0.06	0	A	0	0.13	0.2	A	0
NB	LT	0.50	43.6	D	36.2	0.77	60.5	E	61.1
	Thru	-	-	-	-	-	-	-	-
	RT	0.10	0	A	0	0.13	0.2	A	0
EB	LT	0.73	49.1	D	55.3	0.73	48.9	D	54.8
	Thru	0.81	21.9	C	159.0	0.78	21.9	C	115.3
	RT	0.16	2.8	A	9.5	0.22	2.7	A	10.6
WB	LT	0.52	45.0	D	33.3	0.65	47.9	D	47.1
	Thru	0.51	18.9	B	63.6	0.81	25.4	C	123.2
	RT	0.47	3.8	A	16.4	0.56	4.2	A	17.8
Intersection Summary		Max 0.78	Average 21.5	C	-	Max 0.81	Average 24.0	C	-

5) That the Administration continue to monitor and assess the effects on traffic patterns arising from the completion of Circle Drive South and alternate routing.

- Circle Drive South and the Gordie Howe Bridge opened in 2011 and a follow-up study was completed in 2012.
- The Chief Mistawasis Bridge opened October 2, 2018.

The Administration does not recommend proceeding to the development of a capital project for the short-term ramp improvements at this time. During Phase 1 of the Saskatoon Freeway Functional Planning Study a significant change to the regional highway network is proposed – relocating Highway 11 from Idylwyld Drive to Wanuskewin Road near the northern city limits. This has the potential to move some commercial truck traffic from the Circle Drive and Idylwyld Drive interchange further east to the Warman Road interchange as well as shift some commuter traffic in a similar manner. The Administration is working with the Ministry and the Ministry's consultant on the functional plan for the Saskatoon Freeway, as planning progresses to a recommendation the Administration will revisit the Single Point Urban Interchange at this location.

2020/2021 Transportation Services Capital Budget Supplemental Information

ISSUE

This report provides additional information and specific details to the 2020/2021 Transportation Business Line Capital Budget submission.

BACKGROUND

This report supplements the 2020/2021 Capital Budget submission by providing specific details to several Transportation capital projects.

CURRENT STATUS

The 2020/2021 Transportation Capital Budget will present new capital projects that represent the consolidation of many previous projects and are now organized around strategic priorities and directions: Transportation Safety, Transportation Planning, Traffic Control Systems, and the Active Transportation Plan. The consolidation increases efficiency through reduced administration needs and provides a better understanding of process. Capital projects resulting from Neighbourhood Traffic Reviews will remain active to permit the completion of outstanding reviews and installations. Large transportation infrastructure such as an interchange will generate an individual capital project.

DISCUSSION/ANALYSIS

Information that supplements the 2020/2021 Transportation Business Line Capital Budget submission is provided in Appendix 1. It is not meant to be all inclusive, but rather to provide additional information on capital projects within the Transportation Services service line that typically include a list of prioritized projects. A detailed update on the Neighbourhood Traffic Review Implementation for 2020/2021 is provided in Appendix 2.

IMPLICATIONS

There are no legal, social, or environmental implications identified. This report provides supplemental information for the 2020/2021 Business Plan and Budget deliberation of the Transportation Services Business Line.

NEXT STEPS

Individual communication and engagement plans will be developed for projects as required to notify residents, road users, and stakeholders of various Transportation projects. In general, residents can learn about current Transportation projects on the City's social media channels and website.

APPENDICES

1. Transportation Capital Budget Project Details
2. Neighbourhood Traffic Review Implementation 2020/2021 Budget Update

Report Approval

Written by: David LeBoutillier, Engineering Manager, Transportation
Reviewed by: Jay Magus, Director of Transportation
Approved by: Terry Schmidt, General Manager, Transportation & Construction
Department

Admin Report - 2020/2021 Transportation Services Capital Budget Supplemental Information.docx

Transportation Capital Budget Project Details

Capital Project	Allocation/Funding	2020 Details	2021 Details
1504 Neighbourhood Traffic review Permanent Installations	Installation of permanent traffic calming. Reserves: Transportation Infrastructure Expansion + Traffic Safety	\$370,000 <ul style="list-style-type: none"> • Russell Road & Girgulis Crescent • Pembina Avenue & Spadina Crescent East • Leslie Avenue & 14th Street • 14th Street & Bate Crescent • Leslie Avenue between Garrison Crescent and Copland Crescent • Waterbury Road & Nemeiben Road • Garvie Road & Scissons Crescent • Garvie Road & McWillie Avenue • Wilson Crescent & Mackenzie Crescent / Brown Crescent • Victoria Avenue & 6th Street East 	\$520,000 <ul style="list-style-type: none"> • Avenue D & 23rd Street • Saskatchewan Crescent – Idylwyld Crescent to 8th Street West • Temperance Street & Lansdowne Avenue • Temperance Street & 14th Street / Lansdowne Avenue & 14th Street • Glasgow Street & Turner Avenue • Arlington Avenue & Mitchell Street • Richardson Road & 37th Street • Nemeiben Road & Brudell Road • Nemeiben Road & Smoothstone Crescent (east) • Konihowski Road & Haslam Place / McWillie Avenue • Rever Road & Haslam Street / Fairbrother Crescent (south) • Rever Road & Haslam Crescent / Fairbrother Crescent (north) • Stonebridge Common & Snell Crescent • Vic Boulevard (Assaly Street to Hunter Road) • Patrick Crescent & Muzyka Road (south) • Lanyone Avenue & 112th Street • Bryans Avenue & 112th Street • Hampton Circle & Hampton Gate North • Pendencygrasse Road in front of St. Mark School • Herman Avenue & Isabella Street

Capital Project	Allocation/Funding	2020 Details	2021 Details
1512 Neighbourhood Traffic Management	Installation and maintenance of temporary traffic calming. Reserves: Traffic Safety	\$350,000 <ul style="list-style-type: none"> • Complete implementation of the 2019 NTR temporary recommendations. • Complete NTR for the 2020 neighbourhoods: <ul style="list-style-type: none"> ○ Evergreen ○ Rosewood and Lakewood Suburban Centre ○ Gordie Howe Management Area, West Industrial and Southwest Industrial ○ Agriplace and Marquis Industrial ○ Sutherland Industrial ○ Confederation Suburban Centre ○ The Willows ○ CN Industrial ○ Central Business District ○ Central Industrial 	\$100,000 <ul style="list-style-type: none"> • Complete implementation of the 2020 NTR temporary recommendations.

Capital Project	Allocation/Funding	2020 Details	2021 Details
2288 Transportation Safety	A consolidated set of transportation safety focussed projects. Reserves: Transportation Infrastructure Expansion + Traffic Safety + Infrastructure Reserve Transportation	\$1,130,000	\$1,230,000
		\$0 Community Traffic Reviews <ul style="list-style-type: none"> No work planned. 	\$100,000 Community Traffic Reviews <ul style="list-style-type: none"> Develop CTR program scope. Conduct one CTR engagement event to refine engagement strategy and communication materials.
		\$100,000 Railway Crossing Safety Improvements <ul style="list-style-type: none"> Upgrades to meet Transport Canada Regulations. 	\$100,000 Railway Crossing Safety Improvements <ul style="list-style-type: none"> Upgrades to meet Transport Canada Regulations.
		\$250,000 Pedestrian Safety Improvements <ul style="list-style-type: none"> 34th Street & Avenue E Avenue F & 31st Street Avenue W & Rylston Road Copland Crescent midblock in front of Misbah School curb extensions 	\$250,000 Pedestrian Safety Improvements <ul style="list-style-type: none"> Wilson Crescent & Harrison Crescent (north) Wilson Crescent & Harrison Crescent (south) Wilson Crescent & Macdermid Crescent / Cairns Avenue 37th Street & pathway east of Byers Crescent
		\$400,000 Geometric Modifications <ul style="list-style-type: none"> 33rd Street & Warman Road intersection improvements. 	\$400,000 Geometric Modifications <ul style="list-style-type: none"> 33rd Street & Warman Road intersection improvements.
		\$380,000 High-Speed Roadside Safety Improvements <ul style="list-style-type: none"> Idylwyld Drive median barrier is estimated to cost \$1,250,000. Work will proceed once the capital funding is sufficient to complete the entire project (anticipated in 2023 at current funding levels). 	\$380,000 High-Speed Roadside Safety Improvements <ul style="list-style-type: none"> Idylwyld Drive median barrier is estimated to cost \$1,250,000. Work will proceed once the capital funding is sufficient to complete the entire project (anticipated in 2023 at current funding levels).
2289 Transportation Planning	Functional planning studies identify future transportation needs. Reserves: Transportation Infrastructure Expansion	\$250,000 <ul style="list-style-type: none"> Complete a functional planning study for Circle Drive between Laurier Drive and Avenue C, including the intersections with Airport Drive and Avenue C. 	\$250,000 <ul style="list-style-type: none"> Complete a functional planning study for Circle Drive between east of the Circle Drive North bridge and College Drive.

Capital Project	Allocation/Funding	2020 Details	2021 Details
2290 Traffic Control Systems	A consolidated set of traffic control focussed projects. Reserves: Transportation Infrastructure Expansion + Traffic Safety + Infrastructure Reserve Transportation	\$1,225,000	\$1,200,000
		\$375,000 New Traffic Signals <ul style="list-style-type: none"> 33rd Street & Northumberland/Catherwood Avenue. Upgrade from PAS to full signal. 33rd Street & Warman Road signal upgrades required as part of intersection improvements. 	\$400,000 New Traffic Signals <ul style="list-style-type: none"> 3rd Avenue & 19th Street. Budget for signal upgrades in conjunction with intersection improvements and BRT project.
		\$400,000 Traffic Signal Infrastructure Upgrades <ul style="list-style-type: none"> Replace 4 cabinets. Replace 25 controllers. Infrastructure upgrades (underground, poles, signal fixtures, electronics, etc.) at various locations. Vehicle detection repairs and new installation. Left-turn arrows with detections at 2 locations. 	\$400,000 Traffic Signal Infrastructure Upgrades <ul style="list-style-type: none"> Replace 5 traffic cabinets. Replace 10 traffic controllers. Signal infrastructure upgrades at various locations as identified through preventive maintenance program. Install non-intrusive overhead detection, new left-turn arrows, accessible pedestrian devices, etc.
		\$150,000 Advanced Traffic Management System – Communications. <ul style="list-style-type: none"> ATMS Traffic Control Module annual maintenance agreement. ATMS Traffic Management Module annual maintenance agreement. Expand wireless communication system Traffic monitoring cameras at 1 or 2 locations. 	\$100,000 Advanced Traffic Management System – Communications. <ul style="list-style-type: none"> ATMS Traffic Control Module annual maintenance agreement. ATMS Traffic Management Module annual maintenance agreement. Expand wireless communication system.
		\$200,000 Pedestrian Crossing Devices <ul style="list-style-type: none"> 25th Street & Pacific Avenue - RRFB Stonebridge Boulevard & Wellman/Cope Crescent - APC Fairlight Drive & Gropper Crescent - APC Millar Avenue & 43rd Street - upgrade to APC 115th Street & Vickies Avenue - APC 	\$200,000 Pedestrian Crossing Devices <ul style="list-style-type: none"> 20th Street & Avenue K - APC 20th Street & Avenue E - APC Arlington Avenue & Porter Street - RRFB 115th Street & Kellough Road - RRFB Taylor Street & Weyakwin Drive/Heritage Crescent - PAS
		\$100,000 Traffic Counting Equipment <ul style="list-style-type: none"> Replace aging traffic counting equipment used for either short or long-term traffic volume counts, classification and speed studies. 	\$100,000 Traffic Counting Equipment <ul style="list-style-type: none"> Replace aging traffic counting equipment used for either short or long-term traffic volume counts, classification and speed studies.
		\$1,125,000	\$1,105,000

Capital Project	Allocation/Funding	2020 Details	2021 Details
2468 Active Transportation Plan Implementation	Implement the Action Items identified from within the Active Transportation Plan. Reserves: Active Transportation + Transportation Infrastructure Expansion + Traffic Safety	\$575,000 AT Plan Implementation <ul style="list-style-type: none"> Complete a detailed review of the database of missing sidewalks. Improve the existing cycling network through enhanced crossings, signage and pavement markings. Administer bicycle and pedestrian count program. Continue to update administrative policies, guidelines and standards to support active modes. Support the Learn to Ride Safe Bike program. Support various community events. Promote and educate all road users about the changes to the revised Bike Bylaw. 	\$575,000 AT Plan Implementation <ul style="list-style-type: none"> Improve the existing cycling network through enhanced crossings, signage and pavement markings. Develop Active Transportation Wayfinding Strategic Plan. Administer bicycle and pedestrian count program. Continue to update administrative policies, guidelines and standards to support active modes. Support the Learn to Ride Safe Bike program. Support various community events. Promote and educate all road users about the sharing the road through a continued education and awareness campaign.
		\$50,000 Audible Pedestrian Signal Program <ul style="list-style-type: none"> Install Audible Pedestrian Signals at five retrofit locations in consultation with user requests. 	\$50,000 Audible Pedestrian Signal Program <ul style="list-style-type: none"> Install Audible Pedestrian Signals at five retrofit locations in consultation with user requests.
		\$100,000 Curb Ramp Program <ul style="list-style-type: none"> Install high priority pedestrian accessible curb ramps that do not fall adjacent to roadway resurfacing projects that are planned to be completed in the next three years. 	\$100,000 Curb Ramp Program <ul style="list-style-type: none"> Install high priority pedestrian accessible curb ramps that do not fall adjacent to roadway resurfacing projects asset preservation program projected to be completed in the next three years.
		\$200,000 New Sidewalk Program <ul style="list-style-type: none"> Create a priority list totalling \$20,000,000 to position the City for future potential federally funded programs. Prepare preliminary construction designs and develop cost estimates. 	\$200,000 New Sidewalk Program <ul style="list-style-type: none"> Continue to prioritize sidewalk installations to position the City for future potential federally funded programs. Prepare preliminary construction designs and develop cost estimates.
		\$125,000 Cycling Network <ul style="list-style-type: none"> Implement improvements to existing cycling facilities and construct new facilities to address gaps and barriers. 	\$180,000 Cycling Network <ul style="list-style-type: none"> Implement improvements to existing cycling facilities and construct new facilities to address gaps and barriers.
		\$75,000 Downtown AT Network <ul style="list-style-type: none"> Develop and deliver engagement for Downtown Active Transportation Network. 	\$0 Downtown AT Network <ul style="list-style-type: none"> No work planned.

NEIGHBOURHOOD TRAFFIC REVIEWS IMPLEMENTATION 2020/2021 BUDGET UPDATE



10/11/2019

City of Saskatoon Transportation Division

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1. INTRODUCTION

At the August 14, 2013 City Council meeting, City Council approved the Neighbourhood Traffic Management Program (NTR). The NTR process includes a strategy to review concerns on a neighbourhood-wide basis by engaging the community and stakeholders by identifying specific traffic issues, and developing recommendations that address the issues.

In the past five years of the program, neighbourhood traffic reviews have been completed for 48 residential neighbourhoods. Recommendations for each of these neighbourhoods were presented to City Council as follows:

Neighbourhood	Adoption Date	Neighbourhood	Adoption Date
Mayfair / Kelsey-Woodlawn	August 19, 2014	Parkridge	March 27, 2017
Brevoort Park	February 23, 2015	Silverspring	May 23, 2017
Caswell Hill	March 23, 2015	Stonebridge	September 11, 2017
City Park	April 27, 2015	Sutherland	April 24, 2017
Haultain	April 27, 2015	Willowgrove	March 27, 2017
Holliston	February 23, 2015	Buena Vista	April 16, 2018
Hudson Bay Park	February 23, 2015	Dundonald	May 14, 2018
Nutana	May 25, 2015	Erindale / Arbor Creek	March 12, 2018
Varsity View	May 25, 2015	North Park / Richmond Heights	May 14, 2018
Westmount	February 23, 2015	Pleasant Hill	April 16, 2018
Adelaide-Churchill	April 25, 2016	Queen Elizabeth / Exhibition	April 16, 2018
Avalon	April 25, 2016	Silverwood Heights	May 14, 2018
Confederation Park	April 25, 2016	Wildwood	April 16, 2018
Greystone Heights	April 25, 2016	College Park / East College Park	April 1, 2019
Lakeview	February 29, 2016	Eastview / Nutana Suburban Centre	January 7, 2019
Meadowgreen	February 29, 2016	Fairhaven	April 1, 2019
Montgomery Place	May 24, 2016	Forest Grove	March 4, 2019
Mount Royal	April 25, 2016	Massey Place	March 4, 2019
Grosvenor Park	April 24, 2017	River Heights	February 11, 2019
Hampton Village	June 26, 2017	Riversdale	February 11, 2019
Lakeridge	March 27, 2017	Westview	April 1, 2019

In the past five years of the program, neighbourhood traffic reviews have been completed for two industrial neighbourhoods. Recommendations for these neighbourhoods were presented to City Council as follows:

Neighbourhood	Adoption Date
North Industrial / Hudson Bay Industrial	February 13, 2018

The types of recommendations considered in the NTR process include:

- Signage – stop and yield, pedestrians, parking and other;
- Traffic calming, including curbing and signage;
- Pavement markings;
- Accessibility ramp and sidewalks;
- Pedestrians devices such as Activated Pedestrian Corridors; and
- Others - speed board requests, parking enforcement locations, major intersection reviews.

This report provides an update on the status of the Neighbourhood Traffic Reviews implementation phase for each of the neighbourhoods completed in 2013, 2014, 2015, 2016, 2017 and 2018. In general:

- All signage and pavement markings for the 2013, 2014, 2015, 2016 and 2017 reviews are complete, and the majority of the signage and pavement markings for the 2018 reviews have been installed. The remainder of the pavement markings for the 2018 reviews will be complete by spring 2020.
- All traffic calming devices have been installed temporarily.
- Pedestrian devices have been added to the priority list and will be installed based on funding allocations.
- Sidewalks for a few of the reviews have been installed and all remaining locations have been added to the sidewalk retrofit program. Prioritization of sidewalk and access ramp implementation will be coordinated with the Active Transportation Plan implementation and installed based on funding allocations.

Specifics for each of the neighbourhoods including the proposed measure, location, and the implementation status (installed temporarily, complete, etc.) are provided in Chapter 2.

2. DETAILS OF NEIGHBOURHOOD TRAFFIC REVIEWS

Details of the 2013 Neighbourhood Traffic Review are provided in the following table:

Table 2-1: Mayfair / Kelsey-Woodlawn Implementation Status

Details of the 2014 Neighbourhood Traffic Reviews are provided in the following tables:

Table 2-2: Brevoort Park Implementation Status

Table 2-3: Caswell Hill Implementation Status

Table 2-4: City Park Implementation Status

Table 2-5: Haultain Implementation Status

Table 2-6: Holliston Implementation Status

Table 2-7: Hudson Bay Park Implementation Status

Table 2-8: Nutana Implementation Status

Table 2-9: Varsity View Implementation Status

Table 2-10: Westmount Implementation Status

Details of the 2015 Neighbourhood Traffic Reviews are provided in the following tables:

Table 2-11: Adelaide-Churchill Implementation Status

Table 2-12: Avalon Implementation Status

Table 2-13: Confederation Park Implementation Status

Table 2-14: Greystone Heights Implementation Status

Table 2-15: Lakeview Implementation Status

Table 2-16: Meadowgreen Implementation Status

Table 2-17: Montgomery Place Implementation Status

Table 2-18: Mount Royal Place Implementation Status

Details of the 2016 Neighbourhood Traffic Reviews are provided in the following tables:

Table 2-19: Grosvenor Park Implementation Status

Table 2-20: Hampton Village Implementation Status

Table 2-21: Lakeridge Implementation Status

Table 2-22: Parkridge Implementation Status

Table 2-23: Silverspring Implementation Status

Table 2-24: Stonebridge Implementation Status

Table 2-25: Sutherland Implementation Status

Table 2-26: Willowgrove Implementation Status

Details of the 2017 Neighbourhood Traffic Reviews are provided in the following tables:

Table 2-27: Buena Vista Implementation

Table 2-28: Dundonald Implementation

Table 2-29: Erindale – Arbor Creek Implementation

Table 2-30: North Park – Richmond Heights Implementation

Table 2-31: Pleasant Hill Implementation

Table 2-32: Queen Elizabeth – Exhibition Implementation

Table 2-33: Silverwood Heights Implementation

Table 2-34: Wildwood Implementation

DETAILS OF THE 2018 NEIGHBOURHOOD TRAFFIC REVIEWS ARE PROVIDED IN THE FOLLOWING TABLES:

Table 2-35: College Park – East College Park Implementation Status
Table 2-36: Eastview – Nutana Suburban Centre Implementation Status
Table 2-37: Fairhaven Implementation Status
Table 2-38: Forest Grove Implementation Status
Table 2-39: Massey Place Implementation Status
Table 2-40: River Heights Implementation Status
Table 2-41: Riversdale Implementation Status
Table 2-42: Westview Implementation Status

Details of the industrial Neighbourhood Traffic Reviews are included in:

Table 2-43: Hudson Bay Industrial and North Industrial Implementation Status

Under the status column in the following tables, permanent installations are subject to funding being approved by City Council through the budgeting process.

TABLE 2-1: MAYFAIR / KELSEY-WOODLAWN IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	34 th Street & Avenue E	Zebra crosswalk	1-2 years	2015	Complete
2	34 th Street & Avenue F	Zebra crosswalk	1-2 years	2015	Complete
3	35 th Street & Avenue E	Zebra crosswalk	1-2 years	2015	Complete
4	36 th Street & Avenue E	Zebra crosswalk	1-2 years	2015	Complete
5	37 th Street & Avenue D	Zebra crosswalk	1-2 years	2015	Complete
6	37 th Street & Avenue E	Zebra crosswalk	1-2 years	2015	Complete
7	37 th Street & Avenue F	Zebra crosswalk	1-2 years	2015	Complete
8	34 th Street & Avenue I	Zebra crosswalk	1-2 years	2015	Complete
9	34 th Street & Avenue C	Change yield to stop	1-2 years	2015	Complete
10	35 th Street & Avenue D	Change yield to stop	1-2 years	2015	Complete
11	37 th Street & Avenue C	Change yield to stop	1-2 years	2015	Complete
12	37 th Street & Avenue F	Change yield to stop	1-2 years	2015	Complete
13	37 th Street & Avenue B	"No parking" signs	1-2 years	2014	Complete
14	Back lane between 38 th Street/39 th Street & Avenue B/Avenue C	20 kph speed signs	1-2 years	2015	Complete
15	Back lane between 37 th Street/38 th Street & Avenue C and Avenue D	20 kph speed signs	1-2 years	2015	Complete
16	39 th Street & Idylwyld Drive	Accessibility ramps	1-2 years	2017	On ramp accessibility list
17	34 th Street & Avenue E	Curb extensions	1-5 years	Installed temporarily in 2015	Permanent in 2020
18	34 th Street & Avenue I	Median islands	1-5 years	July 2017 - revised to temporary median island on north side	Permanent in 2022
19	35 th Street & Avenue E	Curb extension	1-5 years	Permanent in 2017	Complete
20	35 th Street & Avenue I	Curb extensions (NW and NE corners)	1-5 years	Installed temporarily in 2015	Removed - street too narrow, transit issues
21	36 th Street & Avenue C	Directional closure	1-5 years	Permanent in 2018	Complete
22	36 th Street & Avenue E	Curb extensions	1-5 years	2016	Removed - street is too narrow, transit and school bus issues
23	36 th Street & Avenue G	Median island	1-5 years	2016 - removed - street is too narrow, transit issues	Complete
24	37 th Street & Avenue B	Median islands	1-5 years	Permanent in 2017	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
25	37 th Street & Avenue D	Curb extensions	1-5 years	Permanent in 2018	Complete
26	37 th Street & Avenue E	Median island	1-5 years	Permanent in 2018	Complete
27	38 th Street & Avenue C	Directional closure	1-5 years	Installed temporarily in 2014	Complete
28	38 th Street & Avenue D	Median island	1-5 years	Permanent in 2017	Complete
29	38 th Street & Avenue G	Median island	1-5 years	Permanent in 2017	Complete
30	39 th Street & Avenue E	Median islands	1-5 years	Permanent in 2017	Complete
31	Avenue C – south of railway tracks	Curb extension and median island	1-5 years	Spring 2017	Removed - assessment determined devices were not effective
32	36 th Street & Idylwyld Drive	Operational improvements	1-5 years	TBD	Added to intersection improvements list
33	39 th Street & Idylwyld Drive	Add left turn phase	1-5 years	TBD	Added to intersection improvements list
34	37 th Street Avenue B to Avenue D (both sides)	Sidewalk	5 years plus	Fall 2016 (south side)	Complete
35	37 th Street Avenue F to Avenue I (north side)	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
36	38 th Street Idylwyld Drive to Avenue G (both sides)	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
37	Avenue D, 38 th Street Alley to park (west side)	Sidewalk	5 years plus	Requires removal of three elm trees	Removed
38	1 st Avenue between 34 th Street & 38 th Street	Yield signs	1-2 years	2015	Complete
39	2 nd Avenue between 34 th Street & 39 th Street	Yield signs	1-2 years	2015	Complete
40	39 th Street & Saskatchewan Avenue	Change yield to stop	1-2 years	2015	Complete
41	39 th Street & Alberta Avenue	Change yield to stop	1-2 years	2015	Complete
42	39 th Street & Quebec Avenue	Zebra crosswalk	1-2 years	2013	Complete
43	Alberta Avenue 33 rd Street to 34 th Street	Sidewalk (both sides)	5 years plus	2016	Complete
44	Alberta Avenue 34 th Street to 36 th Street	Sidewalk (west side)	5 years plus	Fall 2016	Complete
45	39 th Street - Idylwyld Drive to 1 st Avenue	Sidewalk (both sides)	5 years plus	TBD	On sidewalk retrofit list

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
46	Quebec Avenue 33 rd Street to 40 th Street	Sidewalk (both sides)	5 years plus	TBD	On sidewalk retrofit list
47	Ontario Avenue 33 rd Street to 39 th Street	Sidewalk (both sides)	5 years plus	2017	Complete
48	38 th Street Quebec Avenue to 2 nd Avenue	Sidewalk (both sides)	5 years plus	TBD	On sidewalk retrofit list

TABLE 2-2: BREVOORT PARK IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Arlington Avenue (south of Baldwin Crescent)	"No parking" signs on southeast corner of Arlington Avenue	1-2 years	2015	Complete
2	Arlington Avenue & Early Drive	Standard pedestrian crosswalk	1-2 years	2015	Complete
3	Early Drive & Salisbury Drive	Remove temporary traffic calming; alter direction of stop signs	1-2 years	2015 - changed to a 4-way stop	Complete
4	Early Drive & Curve west of Salisbury Drive	Curve ahead signs and chevrons	1-2 years	Curve ahead signs installed; chevrons not necessary	Complete
5	Salisbury Drive at curve west of Conn Avenue	Permanent median islands	1-5 years	Permanent in 2017	Complete
6	Salisbury Drive & lane leading to park	Standard pedestrian crosswalk	1-2 years	2015	Complete
7	3rd Street & Argyle Avenue	2-way stop	1-2 years	2015	Complete
8	3rd Street & Tucker Crescent	2-way stop	1-2 years	2015	Complete
9	Back lanes – west of Argyle Avenue	20 kph speed limit signs	1-2 years	2015	Complete
10	Back lanes – north of Tayler Street	20 kph speed limit signs	1-2 years	2015	Complete
11	Back lane – west of Arlington Avenue	One-way signs	1-2 years	2015	Complete
12	Brevoort Park School & St. Matthew School	Drop-off / Pick-up zone	1-2 years	June 2017 - discussed with school principal and existing signs are adequate	Complete
13	In front of Brevoort Park School & St. Matthew School	Parking enforcement (i.e. parking over crosswalks, blocking driveways)	1-2 years	Request for enforcement forwarded to parking services	Complete
14	Early Drive & Webb Crescent	Parking restrictions	1-2 years	2015 - increased parking restrictions to allow clearance for Transit in April 2016	Complete
15	Early Drive & Webb Crescent	Median island	1-5 years	Permanent in 2018	Complete
16	Early Drive & Phillips Crescent (west)	Median island	1-5 years	Permanent in 2018	Complete
17	Arlington Avenue & Early Drive	Curb extension	1-5 years	Installed temporarily in 2015	Permanent in 2022
18	Taylor Street & Arlington Avenue	Major intersection review	5 years plus	2018	Phase 1 improvements complete

TABLE 2-3: CASWELL HILL IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Avenue B & 27 th Street	Stop Signs	1-2 years	2015	Complete
2	32 nd Street & Avenue D	Alternate direction of stop signs	1-2 years	2015	Complete
3	Avenue C & 30 th Street	Change yield to stop	1-2 years	2015	Complete
4	Jamieson & Avenue C	Change yield to stop	1-2 years	2015	Complete
5	Avenue F & 30 th Street	Change yield to stop; install closer to intersection	1-2 years	2015	Complete
6	Avenue H & 31 st Street	Zebra crosswalks	1-2 years	2015	Complete
7	Avenue F north of 30 th Street (at curve)	30 kph advisory speed sign and curve ahead sign	1-2 years	2015	Complete
8	Avenue D & 30 th Street	"No parking" signs	1-2 years	2015	Complete
9	29 th Street & Avenue C	Zebra crosswalks	1-2 years	2015	Complete
10	29 th Street & Avenue B	Pedestrian corridor and zebra crosswalk	3-5 years	Signage and zebra crosswalk installed 2015	Complete
11	Avenue E & 30 th Street	Median islands	1-5 years	Installed temporarily in 2015; permanent in 2017	Complete
12	Avenue E & 30 th Street	Accessibility ramps	3-5 years	2017	Complete
13	Avenue E & 30 th Street	Asphalt pathway connection into park	5 years plus	Fall 2016	Complete
14	Avenue E & 30 th Street	Add reflectors to park posts	1-5 years	2017	Complete
15	Avenue D & 23 rd Street	Directional closure	1-5 years	Revised to median island and curb extension in 2017	Permanent in 2021
16	Avenue F & 31 st Street (south)	Curb extensions and raised median island	1-5 years	Installed temporarily in 2015; street is too narrow for median island. Changed to two curb extensions on south side.	Permanent in 2020
17	Avenue D & 31 st Street	Curb extension	1-5 years	2018	Complete
18	30 th Street - Idylwyld Drive to Avenue C (south side)	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
19	Avenue F - parking lot south of pool to 31 st Street (west side)	Sidewalk	5 years plus	Fall 2016	Complete
20	Avenue D - portions on east side, north & south of 23 rd Street to connect to existing	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
21	Avenue E - 28 th Street to 29 th Street (east side)	Sidewalk	5 years plus	TBD	On sidewalk retrofit list

TABLE 2-4: CITY PARK IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	7 th Avenue & 33 rd Street	Install advanced 4-way stop sign; zebra crosswalks	1-2 years	2015	Complete
2	Spadina Crescent between Queen Street & Duke Street	Speed display board	1-2 years	2015	Complete
3	1 st Avenue & 26 th Street	Remove parking on west side	1-5 years	Spring 2017 - changed to parallel parking and 15 minute loading zone	Complete
4	26 th Street between 2 nd Avenue & 5 th Avenue	Install "no parking" signs near back lanes	1-2 years	2015	Complete
5	Bottom of University bridge	Move advanced pedestrian sign; add tab "watch for pedestrians"	1-2 years	2015	Complete
6	7 th Avenue & Princess Street	Install "no parking" signs on northwest corner	1-2 years	2015	Complete
7	1 st Avenue & Queen Street	Zebra crosswalk	1-2 years	2015	Complete
8	7 th Avenue & Duchess Street	Curb extensions	1-5 years	Permanent in 2019	Complete
9	7 th Avenue & Duke Street	Curb extension	1-5 years	Permanent in 2016	Complete
10	1 st Avenue & 26 th Street	Accessibility ramps	3-5 years		Complete
11	Queen Street - 1 st Avenue to alley	Sidewalk	5 years plus	TBD	On sidewalk retrofit list

TABLE 2-5: HAULTAIN IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Broadway Avenue & 1 st Street	Install "no parking" signs on southeast corner	1-2 years	2015	Complete
2	Taylor Street & Dufferin Avenue	Install "no parking" signs on northeast corner of Taylor St 10m from intersection	1-2 years	2015	Complete
3	Clarence Avenue between 2 nd Street & alley to north	Install "no parking" signs between bus stop and alley	1-2 years	2015	Complete
4	Back lane beside Shell gas station (between 8 th Street & 7 th Street near Broadway Avenue)	20 kph speed sign	1-2 years	2015	Complete
5	Broadway Avenue & 6 th Street	Install standard pedestrian crosswalk	3-5 years	2015	Complete
6	Lansdowne Avenue at 4 th Street	Median islands	1-5 years	Permanent in 2017	Complete
7	Lansdowne Avenue & 6 th Street	Median islands	1-5 years	Permanent in 2017	Complete
8	Dufferin Avenue & 1 st Street	Median islands	1-5 years	Permanent in 2017	Complete
9	Dufferin Avenue & 3 rd Street	Median islands	1-5 years	Permanent in 2017	Complete
10	Dufferin Avenue & 5 th Street	Median islands	1-5 years	Permanent in 2017	Complete
11	Dufferin Avenue & 7 th Street	Median islands	1-5 years	Permanent in 2017	Complete
12	Albert Avenue Taylor Street to 4 th Street (west side)	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
13	Lansdowne Avenue 2 nd Street to 8 th Street (east side)	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
14	Dufferin Avenue Taylor Street to 1 st Street (east side)	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
15	Dufferin Avenue 2 nd Street to 8 th Street (east side)	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
16	Taylor Street & Clarence Avenue	Major intersection review	5 years plus	TBD	Added to intersection improvements list
17	8 th Street between Broadway Avenue & Clarence Avenue	Include review in Active Transportation Plan with options to add pedestrian/cyclist crossing	5 years plus	TBD	Review as part of Active Transportation program and Bus Rapid Transit Corridor

TABLE 2-6: HOLLISTON IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Louise Avenue (20m south of 8 th Street)	"No parking" sign on west side	1-2 years	2015	Complete
2	Grosvenor Avenue (beside The Keg & Jerry's access)	"No parking" signs 5m on either side	1-2 years	2015	Complete
3	Louise Avenue & 5 th Street	"No parking" signs on Louise Avenue (10m on southwest corner, 15m on northwest corner)	1-2 years	2015	Complete
4	Back Lane (between 7 th / 3 rd Streets & Preston / Grosvenor Avenues)	20 kph speed signs	1-2 years	2015	Complete
5	Back Lane (behind Sobeys & beside 1615 - 7 th Street E)	"Local Traffic Only" sign, 20 kph speed sign and stop sign	1-2 years	2015	Complete
6	Isabella Street near Canon Smith Park	Playground sign	1-2 years	2015	Complete
7	5 th Street between Louise Avenue & Grosvenor Avenue	Playground signs	1-2 years	2015	Complete
8	3 rd Street & Sommerfeld Avenue	Standard crosswalk (west leg)	1-2 years	2015	Complete
9	Taylor Street & Grosvenor Avenue	Zebra crosswalks; "no parking" sign 15m on Taylor Street (southwest corner)	1-2 years	2015	Complete
10	All uncontrolled intersections	Yield signs	1-2 years	2015	Complete
11	Louise Avenue & Hilliard Street	Raised median island (south leg)	3-5 years	Permanent in 2016	Complete
12	Grosvenor Avenue & 3 rd Street	Median island	1-5 years	Permanent in 2017	Complete
13	Grosvenor Avenue & 5 th Street	Curb extension and median island	1-5 years	Permanent in 2017	Complete
14	Louise Avenue & 7 th Street	Median islands	1-5 years	Permanent in 2017	Complete
15	Louise Avenue & Hilliard Street	Median island	1-5 years	Permanent in 2017	Complete

TABLE 2-7: HUDSON BAY PARK IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Avenue P & Bowerman Street	Install stop sign	1-2 years	2015	Complete
2	Avenue P & Edmonton Avenue	Install stop sign	1-2 years	2015	Complete
3	Avenue H & 31 st Street	Install zebra crosswalks (north and south legs)	1-2 years	2015	Complete
4	Faulkner Crescent & McMillan Avenue	Upgrade yield sign to stop sign (northbound)	1-2 years	2015	Complete
5	32 nd Street at Avenue I, Avenue J, Avenue K, & Avenue L	Install yield signs	1-2 years	2015	Complete
6	Avenue I & 37 th Street	Median island	1-5 years	Permanent in 2017	Complete
7	Avenue I & 36 th Street	Median island	1-5 years		Removed - street is too narrow due to transit issues
8	Avenue I & 34 th Street	Median island	1-5 years	July 2017 - revised to temporary median island on north side	Permanent in 2022
9	Valens Drive (in front of Henry Kelsey School)	Curb extension	1-5 years	Permanent in 2017	Complete
10	Avenue I, Howell Avenue to 36 th Street	Sidewalk	5 years plus	2017	Complete

TABLE 2-8: NUTANA IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Dufferin Avenue & 9 th Street	Stop signs	1-2 years	2016 - stop bar pavement marking added to enhance compliance	Complete
2	Dufferin Avenue & 10 th Street	Stop signs	1-2 years	2016	Complete
3	Eastlake Avenue & 10 th Street	Stop signs	1-2 years	2016	Complete
4	Eastlake Avenue & Main Street	4-way stop	1-2 years	2016	Complete
5	Broadway Avenue between 9 th Street & 12 th Street	Combine school zones	1-2 years	2016	Complete
6	Clarence Avenue & 14 th Street	Zebra crosswalk	1-2 years	2016	Complete
7	Saskatchewan Crescent East & McPherson Avenue	Enhance pedestrian signs and parking restrictions	1-2 years	2015	Complete
7	Saskatchewan Crescent West & 8 th Street West	Zebra crosswalks	1-2 years	2016	Complete
8	Eastlake Avenue & 11 th Street	Zebra crosswalks	1-2 years	2016	Complete
9	Saskatchewan Crescent West between Idylwyld Crescent & 8 th Street West	Curb extension	1-5 years	Installed temporarily in 2015	Permanent in 2021
10	12 th Street & Lansdowne Avenue	Parking restrictions, crosswalks; stop sign	1-2 years	2016	Complete
11	12 th Street & Lansdowne Avenue	Median island	1-5 years	Spring 2017	Removed - assessment determined devices were not effective; not a pedestrian crossing
12	8 th Street West & Poplar Crescent	Median island and curb extension	1-5 years	Permanent in 2018	Complete
13	8 th Street West & Poplar Crescent	Zebra crosswalks	1-2 years	2016	Complete
14	14 th Street between Lansdowne Avenue & Temperance Street	Closure (curb extensions and bollards)	1-5 years	Installed temporarily in 2016	Permanent in 2021 ¹
15	Dufferin Avenue & 11 th Street	Stop signs	1-2 years	2016	Complete
16	Dufferin Avenue & 11 th Street	Curb extension	1-5 years	Permanent in 2017	Complete
17	Temperance Street / Lansdowne Avenue / 14 th Street	Parking restrictions, crosswalks, yield sign; stop sign	1-2 years	2016	Complete
18	Temperance Street & Lansdowne Avenue	Curb extensions and median island	1-5 years	Installed temporarily in 2015	Permanent in 2021

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
19	9 th Street & Idylwyld Drive / Lorne Avenue	Directional closure	1-5 years	Installed temporarily in 2015 and removed. Installed temporarily as pilot project in 2018.	Pilot project complete
20	9 th Street & McPherson Avenue	Remove temporary roundabout	1-5 years	Installed temporarily in 2011	Complete
21	Clarence Avenue & 11 th Street	Active pedestrian corridor	1-5 years	2015	Complete
22	Broadway Avenue & 9 th Street	Pedestrian-activated signal	1-5 years	Permanent in 2017	Complete
23	Broadway Avenue	Chirping' sound to indicate crossings at intersections where traffic signals are present	1-5 years		Complete
24	Various locations	Parking enforcement	ongoing		Ongoing with parking enforcement
25	Saskatchewan Crescent between Cherry Street and 8 th Street	Speed display board	5 years plus	Location was assessed and device cannot be installed due too many trees blocking solar panel	Complete
26	18 th Street & University Drive	Curb extension	1-5 years	Installed temporarily in 2015	Permanent in 2022 ¹
27	18 th Street & Sask Crescent	Standard crosswalk	1-2 years	2016	Complete
28	Clarence Avenue & back lane north of University Drive	Add "Do Not Enter" tab to existing "Do Not Enter" sign	1-2 years	2016	Complete

TABLE 2-9: VARSITY VIEW IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Clarence Avenue & 14 th Street	Zebra crosswalk; advanced pedestrian sign; enhance pedestrian crossing signs	1-2 years	2015	Complete
2	University Drive & McKinnon Avenue	Pavement markings to indicate stop lines for four-way stop	1-2 years	2015	Complete
3	Colony Street & Bottomley Avenue	Zebra crosswalk	1-2 years	2015	Complete
4	14 th Street & McKinnon Avenue	Stop signs	1-2 years	2015	Complete
5	Wiggins Avenue & 14 th Street	Move northbound "no parking" sign to stop sign is not obstructed	1-2 years	2015	Complete
6	McKinnon Avenue & Colony Street	"No parking" sign	1-2 years	2015	Complete
7	Back lane north of park (Cumberland Avenue & Bottomley Avenue)	20 kph and playground signs	1-2 years	2015	Complete
8	Hugo Avenue & 15 th Street	"No parking" signs	1-2 years	2015	Complete
9	Temperance Street & McKinnon Avenue	Stop signs or four-way stop	1-2 years	2015	Complete
10	Back lane near 1100 block of Elliott Street (and Munroe Avenue)	20 kph speed sign	1-2 years	2015	Complete
11	Clarence Avenue & 11 th Street	Active pedestrian corridor	1-5 years	2015	Complete
12	Munroe Avenue 15 th Street to Colony Street	Sidewalk	5 years plus	Removed	No longer feasible as construction of new sidewalk would damage or cause removal of existing trees
13	Munroe Avenue Aird Street to Temperance Street	Sidewalk	5 years plus		
14	McKinnon Avenue 10 th Street to 11 th Street	Sidewalk	5 years plus		
15	McKinnon Avenue 15 th Street to Colony Street	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
16	11 th Street Clarence Avenue to multi-use trail behind Albert Community Centre	Sidewalk	5 years plus	Fall 2016	Complete
17	Munroe Avenue 11 th Street to 12 th Street	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
18	Cumberland Avenue Main Street to back lane (south)	Sidewalk	5 years plus	Fall 2016	Complete
19	14 th St & McKinnon Avenue	Curb extensions	2 to 5 years	Installed temporarily fall 2017	Permanent in 2025

TABLE 2-10: WESTMOUNT IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	All uncontrolled intersections	34 yield signs	1-2 years	2015	Complete
2	Bedford Road & Avenue K; Bedford Road & Avenue I	4 stop signs (east-west facing)	1-2 years	2015	Complete
3	Rusholme Road between Avenue M & Avenue K	Extend school zone	1-2 years	2015	Complete
4	Avenue H & 31 st Street	Zebra crosswalks	1-2 years	2015	Complete
5	29 th Street & McMillan Avenue	Zebra crosswalks	1-2 years	2015	Complete
6	29 th Street & Avenue L	Zebra crosswalks	1-2 years	2015	Complete
7	29 th Street & Avenue I	Zebra crosswalk	1-2 years	2015	Complete
8	29 th Street & Avenue I	Move mailboxes on southeast corner	1-2 years	Canada Post was contacted in April 2015	Complete
9	McMillan Avenue & Trotter Crescent	Median island	3-5 years	Installed temporarily in 2015	Removed - residents not in favour
10	McMillan Avenue & curve north of 31 st Street	Median islands	3-5 years	Permanent in 2018	Complete
11	29 th Street & McMillan Avenue	Curb extensions	3-5 years	Installed temporarily in 2015	Removed - residents not in favour
12	29 th Street & Avenue L	Curb extensions	1-5 years	Installed temporarily in 2015	Permanent in 2022
13	Avenue M - 22 nd Street to 23 rd Street	Sidewalk	5 years plus	TBD	On sidewalk retrofit list

TABLE 2-11: ADELAIDE-CHURCHILL IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Wilson Crescent & Mackenzie Crescent / Brown Crescent	Zebra crosswalk	1-2 years	2017	Complete
2	Ruth Street & Cairns Avenue	Standard crosswalk	1-2 years	Fall 2016 to Spring 2017	Complete
3	Ruth Street & McKinnon Avenue	"No parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
4	Haultain Avenue - either side of Churchill Park	"Playground Ahead" signs	1-2 years	Fall 2016 to Spring 2017	Complete
5	Cairns Avenue & Munroe Avenue	Zebra crosswalk	1-2 years	Fall 2016 to Spring 2017	Complete
6	McKinnon Avenue & Isabella Street	Stop signs	1-2 years	Fall 2016 to Spring 2017	Complete
7	Mackenzie Crescent at walkway	"No parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
8	Mackenzie Crescent before curve (northbound & southbound) near walkway	"Pedestrian crosswalk" ahead signs	1-2 years	Fall 2016 to Spring 2017	Complete
9	Back lane east of Clarence Avenue - Wilson Crescent to Ruth Street	20 kph speed signs	1-2 years	Summer 2016	Complete
10	Back lane north of Circle Drive east of Calder Court	20 kph speed signs	1-2 years	Fall 2016 to Spring 2017	Complete
11	Back lane between Ferguson Avenue & Calder Avenue	20 kph speed signs	1-2 years	Fall 2016 to Spring 2017	Complete
12	Wilson Crescent	School zone signs	1-2 years	Fall 2016 to Spring 2017	Complete
13	Clarence Avenue & Glasgow Street	Move bus stop	1-2 years	Fall 2016 to Spring 2017	Complete
14	Haultain Avenue - Cascade Street to Ruth Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement	1-2 years	June 2016	Complete
15	Clarence Avenue & Glasgow Street	Review signage at or near intersection	1-2 years	Pilot completed in 2018	Removed
16	Clarence Avenue Circle Drive overpass to Glasgow Street	Speed display board	1-2 years	2019	Complete
17	Clarence Avenue Circle Drive overpass to Glasgow Street	Reduce speed limit to 50 kph	1-2 years	2017	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
18	Walkway between Mackenzie Crescent & Hugh Cairns School	CPTED review to determine if lighting is warranted	1-2 years	CPTED review recommended that lighting not be installed since the walkway leads to an unlit park	Complete
19	Cairns Avenue & Cascade Street	Collect traffic data in spring 2016	1 year	Pedestrian and traffic data determined no pedestrian devices warranted due to low volumes	Complete
20	Wilson Crescent & Macdermid Crescent (east)	Curb extensions	1-5 years	Installed prior to Neighbourhood Traffic Review	Permanent in 2021
21	Wilson Crescent & Mackenzie Crescent / Brown Crescent	Curb extensions	1-5 years	Installed temporarily in summer 2016	Permanent in 2020
22	Haultain Avenue & Cascade Street	Curb extensions	1-5 years	Permanent in 2019	Complete
23	Clarence Avenue Wilson Crescent to Glasgow Street	Geometric Improvements - additional through lane northbound	1-5 years	2017	Complete
24	Haultain Avenue Isabella Street to St. Phillips School (east side)	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
25	Clarence Avenue Glasgow Street to bus stop on southwest corner	Sidewalk	5 years plus	2017	Complete

TABLE 2-12: AVALON IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	All uncontrolled intersections	Yield signs at all uncontrolled intersections	1-2 years	Summer 2016	Complete
2	Back lane - Clarence Avenue to McAskill Crescent	20 kph speed signs	1-2 years	Summer 2016	Complete
3	Glasgow Street - west of Clarence Avenue	Traffic-Calmed Neighbourhood sign	1-2 years	Summer 2016	Complete
4	Glasgow Street & Turner Avenue	Remove crosswalk	1-2 years	2017 (removed due to driveway)	Complete
5	Glasgow Street & Mendel Crescent (west)	Zebra crosswalk	1-2 years	2017	Complete
6	Glasgow Street & Maceachern Avenue	Zebra crosswalk	1-2 years	2017	Complete
7	Wilson Crescent school zone west of Clarence Avenue	Forward peak hour speed data to Saskatoon Police Service to consider enforcement during school hours	1-2 years	2017	Complete
8	Cascade Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement	1-2 years	2016	Complete
9	Wilson Crescent & Harrison Crescent (south)	Curb extensions	1-5 years	Installed prior to Neighbourhood Traffic Review	Permanent in 2021
10	Wilson Crescent & Harrison Crescent (north)	Curb extensions	1-5 years	Installed prior to Neighbourhood Traffic Review	Permanent in 2021
11	Glasgow Street & Turner Avenue	Median island and curb extension	1-5 years	Installed temporarily in summer 2016	Permanent in 2021
12	Glasgow Street & Maceachern Avenue	Curb extensions	1-5 years	Installed temporarily in summer 2016	Permanent in 2023
13	Glasgow Street - Clarence Avenue to Mendel Crescent	Pinch point	1-5 years	Removed 2017	Removed due to complaints
14	Glasgow Street - Maceachern Avenue to Mendel Crescent	Pinch point	1-5 years	Removed 2017	Complete - removed due to complaints
15	Wilson Crescent west of Broadway Avenue to existing sidewalk next to John Lake Park	Sidewalk	5 years plus	TBD	On sidewalk retrofit list

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
16	Clarence Ave & Glasgow St	Median closure (to restrict left turns) trial project for 1 year	1 year	Pilot project completed in 2018	Removed
17	Clarence Avenue between Glasgow Street and south side of Circle Drive overpass	Reduce 60 kph speed limit to 50 kph	1-5 years	2016	Complete
18	Clarence Avenue between Circle Drive overpass & Glasgow Street	Speed display board	1-5 years	2019	Complete
19	Glasgow Street between Clarence Avenue & Broadway Street	Speed humps		2019	Complete

TABLE 2-13: CONFEDERATION PARK IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	33 rd Street & Byng Avenue	Standard crosswalk	1-2 years	Summer 2016	Complete
2	Diefenbaker Drive & Centennial Drive	Add hazard board to stop sign; oversized crosswalk signs; zebra crosswalk; "no parking" signs	1-2 years	Summer 2016	Complete
3	33 rd Street & Tilley Avenue	Zebra crosswalk	1-2 years	Summer 2016	Complete
4	John A. MacDonald Road & Steeves Avenue	Change yield to stop	1-2 years	Summer 2016	Complete
5	Steeves Avenue & 33 rd Street (north intersection)	Street name blade	1-2 years	Summer 2016	Complete
6	Steeves Avenue between Carter Crescent (north) & Carter Crescent (south)	Speed display board	1-2 years	2017	Complete
7	Diefenbaker Drive (all intersections between Centennial Drive & Steeves Avenue)	Parking enforcement	1-2 years	Fall 2016 to Spring 2017	Complete
8	John A. McDonald Road - in front of Confederation Park School	Send speed data to Police Services to consider enforcement during school hours	1-2 years	Fall 2017	Complete
9	Diefenbaker Drive, Confederation Drive, 33 rd Street	Send speed data to Police Services to consider enforcement during peak hours	1-2 years	2016	Complete

TABLE 2-14: GREYSTONE HEIGHTS IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	14 th Street & Quance Avenue	"No parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
2	14 th Street & Arlington Avenue	Zebra crosswalks and "no parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
3	Arlington Avenue & Main Street	Zebra crosswalks	1-2 years	Fall 2016 to Spring 2017	Complete
4	Arlington Avenue & Ling Street	"No parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
5	Lane east of Greystone Heights School (between Main Street & 14 th Street)	20 kph speed signs	1-2 years	Fall 2016 to Spring 2017	Complete
6	Lane east of Greystone Heights School (near lane to Simpson Crescent)	"No parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
7	Main Street - west of Bateman Crescent /Simpson Crescent	Remove "no parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
8	Main Street - west side of Moxon Crescent /Bateman Crescent	Move school zone sign	1-2 years	Fall 2016 to Spring 2017	Complete
9	Main Street & Quance Avenue	Stop signs	1-2 years	Fall 2016 to Spring 2017	Complete
10	Bateman Crescent (east leg) near Main Street	School zone sign	1-2 years	Fall 2016 to Spring 2017	Complete
11	Arlington Avenue & Mitchell Street	Curb extension and median island	1-5 years	Installed temporarily in 2016	Permanent in 2021
12	Arlington Avenue & Main Street	Median island	1-5 years	Permanent in 2017	Complete
13	Main Street & Moxon Crescent	Curb extensions	1-5 years	Permanent in 2019	In progress
14	14 th Street between Quance Avenue & Arlington Avenue	Speed display board	1-2 years	2017	Complete
15	Arlington Avenue & Main Street	Pedestrian and traffic volume count in spring 2016 to determine need for additional curb extension	1 year	2016	Complete
16	14 th Street & Greystone Heights Park (pathway connection on west end)	Pedestrian and traffic volume count in spring to determine if crosswalk should be moved from Quance Avenue	1 year	2016 - pedestrian and traffic data indicated few pedestrians therefore curb extension not recommended	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
17	14 th Street & Quance Avenue	Pedestrian and traffic volume count in spring 2016 to determine need for pedestrian crossing	1 year	2016 - pedestrian and traffic data indicated more pedestrians at Quance Avenue than Greystone Heights Park; therefore crosswalk will remain as is	Complete
18	Back lane between Bateman Crescent/Oliver Crescent/Lindsay Place	Collect traffic volume data in spring 2016	1 year	2016 - turning movement count completed determined low traffic volume; therefore no further recommendations	Complete
19	Lane east of Greystone Heights School (near lane to Simpson Crescent)	Parking enforcement	1-2 years	Fall 2017	Complete
20	14 th Street	Send information to Parking Services to provide enforcement	1-2 years	2016	Complete
21	Quance Avenue	Speeding enforcement (send peak hour data to Saskatoon Police Service for further consideration to enforce)	1-2 years	2016	Complete
22	Arlington Avenue	Speeding enforcement (send peak hour data to Saskatoon Police Service for further consideration to enforce)	1-2 years	2016	Complete
23	Main Street & Moxon Crescent (east leg)	Pedestrian accessibility ramps	1-5 years	TBD	On ramp accessibility list
24	Arlington Avenue & Main Street	Pedestrian accessibility ramps	1-5 years	TBD	On ramp accessibility list

TABLE 2-15: LAKEVIEW IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Kingsmere Boulevard & Whiteshore Crescent (north) / Delaronde Road	School zone sign on signal overhead; "no parking" sign	1-2 years	Spring 2017 - changed parking restriction to 15 m on southeast corner due to stop bar	Complete
2	Kingsmere Boulevard & curve between Delaronde Road & Delaronde Road	School zone sign	1-2 years	Spring 2017	Complete
3	Kingsmere Boulevard & Whitewood Road / Wollaston Crescent	"No parking" sign	1-2 years	Spring 2017	Complete
4	Kingsmere Boulevard & all intersecting streets between Taylor Street & Weyakwin Drive	Stop signs	1-2 years	Spring 2017	Complete
5	Taylor Street & Weyakwin Drive	"No parking" sign	1-2 years	Spring 2017	Complete
6	Stillwater Drive & McKercher Drive	Zebra crosswalks	1-2 years	Summer 2016	Complete
7	Stillwater Drive & Emerald Crescent (west)	Zebra crosswalks	1-2 years	Summer 2016	Complete
8	Kingsmere Boulevard & Costigan Road (north)	Median island	1-5 years	Permanent in 2018	Complete
9	Kingsmere Boulevard & Costigan Road (south)	Median islands	1-5 years	Permanent in 2017	Complete
10	Stillwater Drive & Kingsmere Boulevard	Median island	1-5 years	Removed due to complaints.	Removed
11	Stillwater Drive & Emerald Crescent (west)	Curb extension	1-5 years	Removed curb extension on southwest corner due to driveway	Removed
12	Taylor Street & Weyakwin Drive	Median island	1-5 years	Permanent in 2018	Complete
13	Taylor Street - 200m west of Weyakwin Drive	Speed display board	1-2 years	2017	Complete
14	Crean Lane	Speed study in spring 2016 to determine additional measures	1 year	Fall 2016 - speed study indicated 85 th percentile speed was low - 35.3 kph; no further recommendations	Complete
15	Lakeshore Crescent	Speed study in spring 2016 to determine additional measures	1 year	Fall 2016 - speed study indicated 85 th percentile speed was low - 34.7 kph; no further recommendations	Complete

TABLE 2-16: MEADOWGREEN IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Witney Avenue & 19 th Street	Stop signs	1-2 years	Spring 2016	Complete - added hazard boards to improve visibility
2	Witney Avenue & 20 th Street	4-way stop	1-2 years	Spring 2016	Complete - added hazard boards to improve visibility
3	Avenue X between 2 nd driveway (behind 'Touch of Ukraine') south of 22 nd Street to 125 Avenue X	"No parking" sign	1-2 years	Spring 2016	Complete
4	21 st Street & Avenue W	Hazard board ad oversized crosswalk signs	1-2 years	Spring 2016	Complete
5	21 st Street & Avenue Y	Stop signs	1-2 years	Spring 2016	Complete
6	Witney Avenue & 20 th Street	Median islands	1-5 years	Permanent in 2017	Complete
7	18 th Street & Avenue Y	Curb extension and median island	1-5 years	Permanent in 2019	Complete
8	Witney Avenue & 21 st Street	Curb extension	1-5 years	Follow-up study indicated an increase in volumes and no speed reduction. 85 th percentile operating speeds are below the posted speed limit.	Removed
9	Avenue W - north of 18 th Street	Bus shelter	1-5 years	2017	Complete
10	Avenue W & 18 th Street	Active pedestrian corridor	1-5 years	Reviewed as part of Pleasant Hill NTR and device is no longer warranted	Complete
11	18 th Street - Avenue W to Vancouver Avenue	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
12	21 st Street between Witney Avenue & Avenue W	Sidewalk	5 years plus	TBD	On sidewalk retrofit list

TABLE 2-17: MONTGOMERY PLACE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	11 th Street Bypass (130m west of Crescent Boulevard)	50 kph speed sign	1-2 years	Fall 2016 to Spring 2017	Complete
2	11 th Street & cul-de sac on east end	Bollards/posts (to restrict access from 11 th St Bypass)	1-2 years	2017	Complete
3	11 th Street (west of convenience store next to Fairlight Drive)	"No parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
4	11 th Street (west of Dundonald Avenue & east of Circle Drive)	Wayfinding signs for Landfill	1-2 years	Fall 2016 to Spring 2017	Complete
5	Mountbatten Street & Lancaster Boulevard	"No parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
6	Caen Street & Lancaster Boulevard	Stop signs	1-2 years	Fall 2016 to Spring 2017	Complete
7	Caen Street & Lancaster Boulevard	Standard crosswalk	1-2 years	Fall 2016 to Spring 2017	Complete
8	Ortona Street & Lancaster Boulevard	Standard crosswalk	1-2 years	Fall 2016 to Spring 2017	Complete
9	Ortona Street & Lancaster Boulevard	Move bus stop from centre of intersection to southeast corner of intersection on Lancaster Blvd	1-2 years	NA	Recommendation removed; Transit indicated that the bus stop cannot be moved due to ditches
10	Ortona Street & Currie Avenue	Zebra crosswalk and "no parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
11	Ortona Street & Crerar Drive	Zebra crosswalk	1-2 years	Fall 2016 to Spring 2017	Complete
12	Dieppe Street & Crerar Drive	"No parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
13	Dieppe Street & Crerar Drive	Zebra crosswalks	1-2 years	Fall 2016 to Spring 2017	Complete
14	All intersections along bus route	Stop signs	1-2 years	Fall 2016 to Spring 2017	Complete
15	Back lane south of 11 th Street (access from Elevator Road)	20 kph speed sign	1-2 years	Fall 2016 to Spring 2017	Complete
16	Back lane south of 11 th Street (access from Dundonald Avenue)	20 kph speed sign	1-2 years	Fall 2016 to Spring 2017	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
17	Back lane accesses near Lt. Gen. GG Simonds Park	20 kph speed signs	1-2 years	Fall 2016 to Spring 2017	Complete
18	Cassino Avenue at corner near Lt. Col. D. Walker Park	"No parking" signs	1-2 years	Fall 2016 to Spring 2017	Complete
19	All accesses from 11 th Street	40 kph speed signs with Community-Wide tab and Share the Road sign	1-2 years	Summer 2016	Complete
20	All accesses from Dundonald Avenue	40 kph speed signs with Community-Wide tab and Share the Road sign	1-2 years	Summer 2016	Complete
21	All accesses from Elevator Rd	40 kph speed signs with Community-Wide tab and Share the Road sign	1-2 years	Summer 2016	Complete
22	Dieppe Street & Haida Avenue	Traffic count in spring 2016	1 year	Spring 2016 - traffic volumes and collision data do not support installation of stop signs.; no changes recommended	Complete
23	Crerar Drive & Mountbatten Street	Traffic count in spring 2016	1 year	Spring 2016 - traffic volume and pedestrian count determined moderate pedestrian usage. Since this is near a playground and a school a standard crosswalk is recommended.	Complete
24	11 th Street Bypass (250m east of Crescent Boulevard)	Speed display board	1-2 years	Summer 2016	Complete
25	11 th Street Bypass (Lancaster Boulevard to Chappell Drive)	Send speed data to Saskatoon Police Service to consider enforcement	1-2 years	Summer 2016	Complete
26	Dundonald Avenue between 11 th Street & Caen Street	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
27	Neighbourhood-wide	Pace Car Program (community driven)	NA	NA	This is at the discretion of the community
28	All inner neighbourhood streets (bound by 11 th Street, Dundonald Avenue, Elevator Road)	Reduce speed limit to 40 kph		2017	Complete

TABLE 2-18: MOUNT ROYAL PLACE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Avenue W & 29 th Street	4-way stop signs	1-2 years	September 2016	Complete
2	Avenue W & Rylston Rd	"No parking" signs and zebra crosswalk	1-2 years	Fall 2016 to Spring 2017	Complete
3	Avenue W & 23 rd Street	Hazard board signs	1-2 years	Fall 2016 to Spring 2017	Complete
4	29 th Street - intersections along bus route (Avenue Q, Avenue R, Avenue X, Avenue Y)	Stop signs	1-2 years	Fall 2016 to Spring 2017	Complete
5	Avenue T & Rylston Road	Zebra crosswalks	1-2 years	Fall 2016 to Spring 2017	Complete
6	Avenue P & 23 rd Street	Hazard board signs	1-2 years	Fall 2016 to Spring 2017	Complete
7	23 rd Street & Avenue R	Stop signs	1-2 years	Fall 2016 to Spring 2017	Complete
8	23 rd Street & Avenue T	4-way Stop signs	1-2 years	Fall 2016 to Spring 2017	Complete
9	Back lane south of Circle Drive between 31 st Street to pedestrian tunnel	20 kph speed signs	1-2 years	Fall 2016 to Spring 2017	Complete
10	23 rd Street & Montreal Avenue	Remove all temporary traffic calming	1-2 years	2016	Complete
11	Avenue W & Rylston Road	Curb extensions	1-5 years	Installed Temporarily in 2016	Permanent in 2020
12	Avenue W & 29 th Street	Median island	1-5 years	Permanent in 2017	Complete
13	Edmonton Avenue near 31 st Street	Speed display board	1-2 years	2017 (Installed south of 31 st St)	Complete
14	Avenue W 22 nd Street to 23 rd Street	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
15	23 rd Street Avenue P to Avenue Q	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
16	23 rd Street Avenue Q to Avenue W	Sidewalk	5 years plus	TBD	On sidewalk retrofit list
17	Bedford Road Avenue W to Avenue T	Sidewalk	5 years plus	TBD	On sidewalk retrofit list

TABLE 2-19: GROSVENOR PARK IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	14 th Street & Leslie Avenue	"No parking" signs (1.5m on southeast and southwest corners on 14 th Street)	1-2 years	2017	Complete
2	14 th Street & Leslie Avenue	Zebra crosswalks	1-2 years	2017	Complete
3	14 th Street & Leslie Avenue	Median island	1-5 years	Installed Temporarily in Summer 2017	Permanent 2020
4	14 th Street & Bate Crescent	"No parking" signs (1.5m on southeast corner on 14 th Street and entire north side of island)	1-2 years	2017	Complete
5	14 th Street & Bate Crescent	Zebra crosswalk	1-2 years	2017	Complete
6	14 th Street & Bate Crescent	Median island	1-5 years	Installed temporarily in summer 2017	Permanent 2020
7	14 th Street & Bate Crescent	Southbound only (i.e. one-way) on the west leg of Bate Crescent	1-2 years	Permanent in 2019	Complete
8	Bate Crescent & Isbister Street	Median island	1-5 years	Revised to curb extension; permanent in 2019	Complete
9	Bate Crescent & curve south of Isbister Street	Median island	1-5 years	Permanent in 2019	Complete
10	Main Street & Garrison Crescent	Standard crosswalk on west leg; larger stop signs; "no parking" signs (10m on southwest and northeast corners on Main Street)	1-2 years	2017	Complete
11	Main Street & Garrison Crescent	Standard crosswalk	1-2 years	2017	Complete
12	Main Street & Louise Avenue	Standard crosswalk	1-2 years	2017	Complete
13	Main Street & Lane east of Latham Place	Additional posts	1-2 years	2017	Complete
14	Back Lanes south of Main Street	20 kph speed limit sign	1-2 years	2017	Complete
15	Lake Crescent & Leslie Avenue	Yield sign on Lake Cres	1-2 years	2017	Complete
16	Leslie Avenue & Lake Crescent	Median island	1-5 years	Installed temporarily in September 2017	Permanent 2022
17	432 / 502 Bate Cres	Remove "Local Traffic Only" signs and yellow posts	>5 years	2017	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
18	224 / 302 Garrison Cres	Remove yellow posts	1-2 years	2017	Complete
19	408 / 502 Garrison Cres	Remove yellow posts	1-2 years	2017	Complete
20	223 / 301 Copland Cres	Remove yellow posts	1-2 years	2017	Complete
21	Copland Cres	Remove yellow posts	1-2 years	2017	Complete
22	Copland Crescent north / south back lane	20 kph speed signs and pedestrian warning signs	1-2 years	2017	Complete
23	14 th Street & Bate Crescent	Sidewalk on south side (north side of island)	>5 years	2019	Complete
24	Louise Avenue between 8 th Street & Main Street	Sidewalk on east side and on west side between Main Street and the back lane (pending approval from Parks with City trees)	>5 years	TBD	Added to sidewalk retrofit list
25	Leslie Avenue between Garrison Crescent & Lake Crescent	Sidewalk on east side (pending approval from Parks with City trees)	>5 years	TBD	Added to sidewalk retrofit list
26	14 th Street west of Preston Avenue	Speed display board facing westbound traffic	1-2 years	2018	Complete
27	Leslie Avenue between Garrison Crescent and Copland Crescent	Permanent median island	3-5 years	Installed Temporarily prior to NTR	Permanent 2020 ¹
28	Copland Crescent (north of Main Street)	Permanent median island	3-5 years	Permanent in 2019	In progress
29	Copland Crescent - midblock in front of Misbah School	Permanent curb extensions	3-5 years	Installed Temporarily prior to Neighbourhood Traffic Review	Permanent 2020 ¹
30	Copland Crescent, Leslie Avenue & surrounding lanes	Parking enforcement (blocking driveways, parking too close to intersections etc.)	1-2 years	2017	Complete
31	Copland Crescent (north of the school)	Enforcement during school hours	1-2 years	Forwarded peak hour data to Saskatoon Police Service	Complete
32	Copland Crescent north / south back lane	Pave lane, speed bumps	>5 years	Report on cost-sharing presented to SPC on Transportation in November 2017	Dust suppression material tested in 2018

TABLE 2-20: HAMPTON VILLAGE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	McClocklin Road & McCallum Lane	Stop sign	1-2 years	2017	Complete
2	McClocklin Road & West Hampton Boulevard	Median island (east leg)	3-5 years	Installed temporarily in 2017	Permanent 2022
3	West Hampton Boulevard & Hargreaves Green	Standard crosswalk (north leg)	1-2 years	2017	Complete
4	Around Parks	Playground Signs	1-2 years	2017	Complete
5	McCallum Lane & Hargreaves Green	Standard crosswalk	1-2 years	2017	Complete
6	Hargreaves Crescent & Hargreaves Green	Standard crosswalk	1-2 years	2017	Complete
7	West Hampton Boulevard & Geary Crescent	Median island (west leg) and “no parking” sign	3-5 years	Installed temporarily in 2017	Permanent 2023
8	McClocklin Road & Pulles Crescent	Stop sign	1-2 years	2017	Complete
9	McClocklin Road & McKague Crescent	“No parking” sign and stop sign	1-2 years	2017	Complete
10	McClocklin Road & McKague Crescent	Median island and curbing	3-5 years	Installed temporarily in 2017	Permanent 2024
11	McClocklin Road (Junor Road - McKague Crescent)	Speed display board	1-2 years	2019	Complete
12	McClocklin Road (Junor Road - McKague Crescent)	Pedestrian ahead sign	1-2 years	2017 - revised to playground sign installed due to lack of crosswalk	Complete
13	Junor Road & Hampton Circle	“No parking” sign and stop sign	1-2 years	2017	Complete
14	Hampton Circle & Geary Crescent	Stop sign	1-2 years	2017	Complete
15	Hampton Circle & Klassen Crescent	Median island (south leg)	3-5 years	Installed temporarily in 2017	Permanent 2023
16	Hampton Circle & Klassen Lane	Stop sign	1-2 years	2017	Complete
17	Hampton Circle & Hampton Gate North	Median island (all legs) with stop signs and “no parking” signs	3-5 years	Installed temporarily in 2017	Permanent 2021
18	Hampton Circle & Henick Lane	Stop sign	1-2 years	2017	Complete
19	Hampton Circle & East Hampton Boulevard	3-way stop	1-2 years	2017	Complete
20	Hampton Circle & East Hampton Boulevard	Median island (north and south legs)	3-5 years	Installed temporarily in 2017	Permanent 2022
21	Hampton Circle & West Hampton Boulevard	3-way stop	1-2 years	2017	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
22	Hampton Circle & West Hampton Boulevard	Median island (north of Hampton Circle) and "no parking" signs	1-2 years	Installed temporarily in 2017	Permanent 2023
23	Hampton Circle & Denham Crescent	Active Pedestrian Corridor and "no parking" signs	1 year	2017	Complete
24	Hampton Circle, 10m south of Denham Crescent & Hampton Circle	School zone signs	1-2 years	2017	Complete
25	Denham Crescent & Denham Way	Guide sign "Access to McClocklin Road"	1-2 years	2017	Complete
26	East Hampton Boulevard & Korol Crescent	Median island (east and west legs)	3-5 years	Installed temporarily in 2017	Permanent 2022
27	Richardson Road & McClocklin Road	4-way stop and "no parking" signs	1-2 years	2018	Complete
28	Richardson Road & McClocklin Road	Median island (north leg)	3-5 years	Installed temporarily after construction completed	Permanent 2022
29	Richardson Road & Manor Road	Stop sign and "no parking" sign	1-2 years	2017	Complete
30	Richardson Road & Lehrer Crescent	Stop sign and "no parking" sign	1-2 years	2017	Complete
31	McClocklin Road & Sumner Crescent	Remove the temporary median island; curb extensions	3-5 years	Removal of island 2017; installed curb extensions temporarily in 2017	Permanent 2023
32	Richardson Road & 37 th Street	Median island (east and west legs) with stop signs	3-5 years	Installed temporarily in 2017	Permanent 2021
33	Geary Lane & Geary Crescent	Yield signs	1-2 years	2017	Complete

TABLE 2-21: LAKERIDGE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Kingsmere Boulevard & Brightwater Crescent	Stop sign and “no parking” sign	1-2 years	2017	Complete
2	Kingsmere Boulevard & Brightwater Crescent	Make temporary calming permanent	3-5 years	Permanent in 2019	In progress
3	Kingsmere Boulevard & Waterbury Road	4-way stop	1-2 years	2017	Complete
4	Emmeline Road & Waterbury Road	“No parking” signs	1-2 years	2017	Complete
5	Emmeline Road & Swan Crescent (west)	Median island	1-2 years	Installed temporarily in 2017	Permanent 2023 ¹
6	Emmeline Road (at midblock crosswalk)	Median island	1-2 years	Installed temporarily in 2017. Revised to east of crosswalk to facilitate snow clearing	Permanent 2023 ¹
7	Emmeline Road (at midblock crosswalk)	Make temporary calming permanent	3-5 years	Installed temporarily prior to NTR process	Permanent 2023 ¹
8	Emmeline Road & Swan Crescent (east)	“No parking” signs	1-2 years	2017	Complete
9	Emmeline Road & Nemeiben Road	Stop sign and “no parking” sign	1-2 years	2017	Complete
10	Nemeiben Road & Brudell Road	Median island and curb extensions (east side)	1-2 years	Installed temporarily in 2017	Permanent 2021 ¹
11	Nemeiben Road & Brabant Crescent	Stop sign	1-2 years	2017	Complete
12	Nemeiben Road & Anglin Place	Stop sign	1-2 years	2017	Complete
13	Nemeiben Road & Smoothstone Crescent (east)	Median island and curb extensions (east side)	1-2 years	Installed temporarily in 2017	Permanent 2021 ¹
14	Nemeiben Road & Smoothstone Crescent (east)	Stop sign	1-2 years	2017	Complete
15	Nemeiben Road & Waterbury Road	Median island with enhanced stop sign	1-2 years	Installed temporarily in 2017	Permanent 2020 ¹
16	Nemeiben Road & Smoothstone Crescent (west)	Stop sign	1-2 years	2017	Complete
17	Waterbury Road & Jan Crescent	Tree trimming	1-2 years	TBD	Complete
18	Weyakwin Drive & Nemeiben Road	“No parking” signs	1-2 years	2017	Complete
19	Weyakwin Drive & Nemeiben Road	Tree trimming	1-2 years	TBD	In progress; tree on private property
20	Taylor Street & Weyakwin Drive	Major intersection improvement		TBD	Added to intersection improvements list

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
21	Brudell Road & Franklin Crescent	Median island and curb extensions (south side)	1-2 years	Installed temporarily in 2017; residents not in favour	Removed
22	Brudell Road & Franklin Crescent	Stop sign	1-2 years	2017	Complete
23	Brudell Road & Keller Crescent	Median island and curb extensions (south side)		Installed temporarily in 2017; residents not in favour	Removed
24	Brudell Road & Keller Crescent	Stop sign	1-2 years	2017	Complete
25	Brudell Road & Keller Crescent	Tree trimming	1-2 years	TBD	Complete
26	Swan Lake	Yield signs	1-2 years	2017	Complete
27	Nemeiben Road, Waterbury Road and Kingsmere Boulevard - all intersecting streets	Stop signs	1-2 years	2017	Complete
28	Nemeiben Road - 35 m east of Emmeline Road	Speed display board for westbound traffic	1-2 years	2017	Complete

TABLE 2-22: PARKRIDGE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	McCormack Road Various locations	Stop sign	1-2 years	2017	Complete
2	McCormack Road & Needham Crescent (East) / Fairburn Court	Median island and curb extensions on west leg of McCormack Road	3-5 years	Installed Temporarily in 2017	Permanent 2023
3	McCormack Road & Streb Crescent (West)	Median island on east leg of McCormack Road	3-5 years	Permanent in 2019	In progress
4	McCormack Road Postnikoff Crescent (West) to Postnikoff Crescent (East)	Mid-block median island	3-5 years	Permanent in 2019	In progress
5	Fairlight Drive & McCormack Road (South) / Pendygrasse Road	Hazard board signs	1-2 years	2017	Complete
6	Fairlight Drive between McCormack Road (North) / Olmstead Road and McCormack Road (South) / Pendygrasse Road	Speed display board facing southbound traffic	1-2 years	2019	Complete
7	Fairlight Drive & Gropper Crescent	Zebra crosswalk on west leg of Fairlight Drive	1-2 years	2017	Complete
8	Fairlight Drive & Diefenbaker Drive	Protected left-turn for eastbound left-turning traffic	1-2 years		Complete
9	Hart Road & Shillington Crescent	"No parking" sign on Hart Road 10m from intersection on northeast corner	1-2 years	2017	Complete

TABLE 2-23: SILVERSPRING IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Konihowski Road & Carr Crescent / Bourgonje Crescent (North)	Standard crosswalk on south leg of Konihowski Road	1-2 years	2017	Complete
2	Konihowski Road & Le May Crescent (South)	Upgrade standard crosswalk to zebra crosswalk	1-2 years	2017	Complete
3	Konihowski Road & Central Avenue	Traffic signals	1-2 years	2018	Complete
4	Konihowski Road & Rever Road	Stop sign on median island on west leg of Konihowski Road and on south leg of Rever Road	1-5 years	Installed temporarily in fall 2017	Permanent 2023
5	Konihowski Road & Pezer Crescent (North)	Median island on south leg of Konihowski Road	1-5 years	Installed temporarily in fall 2017	Permanent 2023
6	Konihowski Road & Haslam Place / McWillie Avenue	Median island on east leg of Konihowski Road	1-5 years	Installed temporarily in fall 2017	Permanent 2021
7	Rever Road & Haslam Street / Fairbrother Crescent (South)	Standard crosswalk on south leg	1-2 years	2017	Complete
8	Rever Road & Haslam Street / Fairbrother Crescent (South)	Median island on north leg of Rever Road	1-5 years	Installed temporarily in fall 2017	Permanent 2021
9	Rever Road & Haslam Crescent / Fairbrother Crescent (North)	Median island on north leg of Rever Road	1-5 years	Installed temporarily in fall 2017	Permanent 2021
10	Haslam Crescent & Haslam Street	Yield sign on Haslam Street assigning right-of-way to Haslam Crescent	1-2 years	2017	Complete
11	Garvie Road & Scissons Crescent	Median island		Installed prior to NTR	Permanent 2020
12	Garvie Road & McWillie Avenue	Median island		Installed prior to NTR	Permanent 2020

TABLE 2-24: STONEBRIDGE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Vic Boulevard between Hunter Road & Assaly Street	Speed display board (facing westbound traffic)	1-2 years	2019	Complete
2	Vic Boulevard & Assaly Street	Zebra crosswalk and curb extensions on east side (added to existing median islands)	3-5 years	Installed temporarily in fall 2017	Permanent 2024
3	Pringle Crescent & Pringle Lane	Standard crosswalk and median island (south side)	3-5 years	Installed temporarily in fall 2017	Permanent 2022
4	Pringle Crescent & Pringle Crescent	Standard crosswalk (north side)	1-2 years	2017	Complete
5	Hunter Road & Kolynchuk Crescent / Pringle Crescent	Standard crosswalk (east side)	1-2 years	2017	Complete
6	Galloway Road & McIntosh Street	Zebra crosswalk and median island on west side (added to existing curb extensions)	3-5 years	Installed temporarily in fall 2017	Permanent 2024
7	Gordon Road & MacInnes Street / Holmes Crescent	Curb extensions (already installed) and parking restrictions	3-5 years	Installed temporarily prior to Neighbourhood Traffic Review	Permanent 2024
8	Gordon Road & Laycock Lane	Parking restrictions on Gordon Road	1-2 years	2017	Complete
9	Stonebridge Boulevard between Galloway Road / Cornish Road & Wellman Crescent / Cope Crescent	Forward peak hour speed data to Saskatoon Police Service for enforcement	1-2 years	2017	Complete
10	Stonebridge Boulevard & Wellman Crescent / Cope Crescent	Active pedestrian corridor	3-5 years	TBD	On pedestrian device list
11	Wellman Lane between Stonebridge Boulevard & driveway to Browns parking lot	Parking restrictions on west side	1-2 years	2017	Complete
12	Cope Crescent & Cope Lane	Standard crosswalk on west side	1-2 years	2017	Complete
13	Cornish Road & Dulmage Crescent / Willis Crescent	Parking restrictions on Cornish Road	1-2 years	2017	Complete
14	Preston Avenue & Willis Crescent / Circle Drive Alliance Church parking lot	Geometric improvements on northeast corner (i.e. increase radius of corner & change from square curb to rolled curb)	3-5 years	TBD	On intersection improvements list

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
15	Hunter Road & Rempel Manor	Remove median islands. Install zebra crosswalks and curb extension on northeast corner	3-5 years	Installed temporarily in fall 2017	Permanent 2022
16	Hunter Road between Preston Ave & bus stop to east	Remove parking on north side	1-2 years	2017	Complete
17	Stonebridge Common & Langlois Way (all intersections)	Stop signs	1-2 years	2017	Complete
18	Stonebridge Common School Zone	Expand school zone to include intersections of Brainerd Crescent and Snell Crescent	1-2 years	2017	Complete
19	Stonebridge Common & Brainerd Crescent	Curb extension (already installed)	3-5 years	Installed temporarily prior to Neighbourhood Traffic Review	Permanent 2025
20	Stonebridge Common & Galloway Road	3-way stop and standard crosswalk on south side	1-2 years	2017	Complete
21	Stonebridge Common & Langlois Way (southeast intersection)	Remove temporary curb extension	1-2 years	2017	Complete
22	Stonebridge Common & Vic Boulevard	3-way stop and standard crosswalk on south side	1-2 years	2017	Complete
23	Stonebridge Common & Snell Crescent	Curb extension (already installed)	3-5 years	Installed temporarily prior to Neighbourhood Traffic Review	Permanent 2021
24	Stonebridge Boulevard & Wellman Crescent / Cope Way	Traffic Signals	5 years plus	TBD	Added to Traffic Control Upgrades Program List
25	Hunter Road & Teal Crescent	Curb extensions	3-5 years	Installed temporarily in 2018	Permanent 2023
26	Vic Boulevard (Assaly Street to Hunter Road)	Speed cushion		TBD	Permanent 2021
27	Vic Boulevard & Teal Crescent / Pringle Crescent	Median island and curb extensions	3-5 years		Temporary installation planned for 2020

TABLE 2-25: SUTHERLAND IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Reid Road & Adolph Way	Standard crosswalk on north leg of Reid Road	1-2 years	2017	Complete
2	Reid Road & 117 th Street	Standard crosswalk on east leg of Reid Road	1-2 years	2017	Complete
3	Rutherford Crescent / Lanyon Avenue & Rutherford Way	Replace yield sign with stop sign	1-2 years	2017	Complete
4	108 th Street & Sutherland House Back Lane	"No parking" signs on south side of 108 th Street six meters from each side of back lane	1-2 years	2017	Complete
5	Central Avenue & 115 th Street	Overhead "Right Turn Only Lane" sign and tab and overhead "Except Buses" tab in northbound direction	1-2 years	2017	Complete
6	Central Avenue & 104 th Street / Central Place	Active Pedestrian Corridor on north leg of Central Avenue	1-2 years	2019	Complete
7	108 th Street near on-ramp	Dashed eastbound merging bicycle line	1-2 years	2017	Complete
8	Reid Road & Reid Road	Standard crosswalk on east leg	3-5 years	2017	Complete
9	Reid Road & Reid Road	Median island on east leg	3-5 years	Installed temporarily in 2017	Permanent installation 2022
10	Lanyon Avenue & 112 th Street	Median island on north leg of Lanyon Avenue	3-5 years	Installed temporarily in 2017	Permanent installation 2021
11	Bryans Avenue & 112 th Street	Median island on west leg of 112 th Street	3-5 years	Installed temporarily in 2017	Permanent installation 2021
12	Rita Avenue & 110 th Street	Curb extensions on north leg of Rita Avenue	3-5 years	Installed temporarily in 2017	Permanent installation 2024
13	105 th Street & Moran Avenue	Median island on west leg of 105 th Street	3-5 years	Installed temporarily in 2017	Permanent installation 2022

TABLE 2-26: WILLOWGROVE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Stensrud Road & Muzyka Road	Curb extension on southeast corner	1-5 years	Installed temporarily in Summer 2017	Removed; cannot install curb extension on southeast corner due to driveway and Transit
2	Stensrud Road & Muzyka Road	Permanent median island	1-5 years	Installed temporarily in 2016	Permanent 2022
3	Stensrud Road & Muzyka Road	Zebra crosswalks	1-2 years	Spring 2017	Complete
4	Stensrud Road north of Keedwell Street	Speed display board facing southbound traffic	1-2 years	2017	Complete
5	Stensrud Road & Van Impe Court / Lamarsh Road	Permanent median island	1-5 years	Installed temporarily in 2016	Permanent 2022
6	Stensrud Road & Willowgrove Boulevard / Square (east side)	Lane designation for Willowgrove Boulevard - left lane is left turn only, right lane is shared through / right turn	1-2 years	Spring 2017	Complete
7	Stensrud Road & Willowgrove Boulevard / Square (west side)	Active pedestrian corridor	1-5 years	2019	Complete
8	Stensrud Road & Addison Road / Shepherd Crescent	Permanent median islands	1-5 years	Installed temporarily in 2016	Permanent 2022
9	Stensrud Road & Paton Crescent (south)	Permanent median island	1-5 years	Installed temporarily in 2016	Permanent 2022
10	Addison Road & Waters Crescent (east)	Permanent median island and curb extension	1-5 years	Permanent in 2019	In progress
11	Addison Road & Waters Crescent (east)	Active pedestrian corridor	1-5 years	2019	Complete
12	Addison Road & Waters Crescent (east)	Parking restrictions on southeast corner (park side)	1-2 years	Spring 2017	Complete
13	Addison Road between Waters Crescent (east) & Waters Crescent (west)	Speed display board facing eastbound traffic	1-2 years	2018	Complete
14	Addison Road between Waters Crescent (east) & Waters Crescent (west)	Forward speed data to Saskatoon Police Service for enforcement	1-2 years	2017	Complete
15	Willowgrove Boulevard & Maguire Crescent (east)	Permanent curb extensions	1-5 years	Installed temporarily in 2016	Permanent 2024

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
16	Willowgrove Boulevard & Maguire Crescent (east)	"No parking" sign on Willowgrove Boulevard 10m from intersection on southwest corner	1-2 years	Spring 2017	Complete
17	Willowgrove Boulevard at midblock crosswalk between Maguire Crescent & Stensrud Road	"No stopping" signs on the south side (northbound side) 10m on either side of the crosswalk	1-2 years	Spring 2017	Complete
18	Muzyka Road & Patrick Crescent (south)	Permanent median island	1-5 years	Installed temporarily in 2016; will be revised to a raised crosswalk	Permanent 2021
19	Patrick Crescent (north) & Patrick Lane	"No parking" signs on Patrick Crescent 20m from intersection on southeast corner	1-2 years	Spring 2017	Complete
20	Patrick Crescent driveways to Ginger Loft condominiums	"No parking" signs 5m on either side	1-2 years	Spring 2017	Complete
21	Patrick Crescent & Patrick Lane / Stefaniuk Crescent	Yield signs (facing Patrick Lane / Stefaniuk Cres)	1-2 years	Spring 2017	Complete
22	Patrick Avenue & Patrick Crescent (north)	Yield sign	1-2 years	Spring 2017	Complete
23	Patrick Avenue & Patrick Crescent (south)	Yield sign	1-2 years	Spring 2017	Complete
24	Paton Crescent (south) east of Paton Avenue	Playground Ahead sign facing westbound traffic	1-2 years	Spring 2017	Complete
25	Willowgrove Terrace & Willowgrove Court	Yield signs (facing Willowgrove Court)	1-2 years	Spring 2017	Complete
26	Willowgrove Avenue & Willowgrove Crescent	Yield signs (facing Willowgrove Avenue)	1-2 years	Spring 2017	Complete
27	Back lane behind 510 Stensrud Road	20 kph sign	1-2 years	Spring 2017	Complete
28	Back lane behind 810 Stensrud Road	20 kph signs	1-2 years	Spring 2017	Complete
29	Lamarsh Terrace	Cul-de-sac signs	1-2 years	Spring 2017	Complete
30	Paton Place	Cul-de-sac signs	1-2 years	Spring 2017	Complete
31	Willowgrove Terrace	Cul-de-sac signs	1-2 years	Spring 2017	Complete

TABLE 2-27: BUENA VISTA IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Eastlake Avenue at 2 nd Street, 4 th Street & 6 th Street	Median islands with additional yield signs	3 to 5 years	Installed temporarily fall 2018	Permanent 2025
2	8 th Street & Eastlake Avenue	Parking restrictions on 8th Street at 20m on NE & SW corners	1 to 2 years	2018	Complete
3	Victoria Avenue & 7 th Street	Parking restrictions on southeast corner at 10m; enhance sightlines	1 to 2 years	2018	Complete
4	Victoria Avenue & 6 th Street	Zebra crosswalks, curb extension on west side and NE corner	3 to 5 years	Installed temporarily fall 2018	Permanent 2020
5	Victoria Avenue & 6 th Street	Remove ramp at centre of intersection and install two new ramps to connect to crosswalks	5 years plus	TBD	On accessibility ramp list
6	Victoria Avenue & 6 th Street	Pedestrian accessibility ramp on SE corner (on Victoria Ave)	5 years plus	TBD	On accessibility ramp list
7	Melrose Avenue & 7 th Street	Move yield sign on southeast corner off of power pole to sign post. Install additional yield signs on medians.	1 to 2 years	2018	Complete
8	Melrose Avenue & 6 th Street	Zebra crosswalks and curb extension on east side	3 to 5 years	Installed temporarily fall 2018	Permanent 2027 ¹
9	Melrose Avenue & 6 th Street	Remove ramp at centre of intersection and install pathway and two new ramps to connect to crosswalks	5 years plus	TBD	On accessibility ramp list
10	Melrose Avenue & 6 th Street	Pedestrian accessibility ramp on NW & SW corners	5 years plus	TBD	On accessibility ramp list
11	Melrose Avenue at 1 st Street, 3 rd Street & 5 th Street	Median islands with additional yield signs	3 to 5 years	Installed temporarily fall 2018	Permanent 2024
12	East-west lane south of 8 th Street between Lorne Avenue & Coy Avenue	20kph signs	1 to 2 years	2018	Complete
13	Lorne Avenue & 6 th Street	Extend arm of pedestrian corridor	3 to 5 years	2019	Complete
14	Lorne Avenue & 5 th Street	Active Pedestrian Corridor	3 to 5 years	2019	Complete
15	Lorne Avenue & 5 th Street	Accessibility ramp on NW corner	5 years plus	TBD	On accessibility ramp list

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
16	Lorne Avenue & 5 th Street	Parking restrictions on southeast corner at 10m	1 to 2 years	2018	Complete
17	Lorne Avenue & 4 th Street	Extend arm of pedestrian corridor	3 to 5 years	TBD	In progress
18	Lorne Avenue & 2 nd Street	Install additional pedestrian crosswalk signs and extend parking restrictions on NW corner	1 to 2 years	2018	Complete
19	Lorne Avenue & Taylor Street	Move bus stop on the southwest corner further south	1 to 2 years	2018	Complete
20	Lorne Avenue & Taylor Street	Move street name blades to same posts as stop signs	1 to 2 years	2018	Complete
21	Lorne Avenue & Taylor Street	Move westbound lane designation sign to more visible location and add pavement markings to show separated lanes for left turn and shared through/right turn lanes	1 to 2 years	2018	Complete
22	Kilburn Avenue & 2 nd Street	Parking restrictions on Kilburn Ave at 10m on NW, SE & SW corners	1 to 2 years	2018	Complete
23	Kilburn Ave & 4 th Street	Parking restrictions on Kilburn Ave at 10m on SE corner and entire west portion of intersection	1 to 2 years	2018	Complete
24	8 th Street & Poplar Crescent	Zebra crosswalk, connect new sidewalk	1 to 2 years	2018	Complete
25	8 th Street - Lorne Avenue to Broadway Avenue	Provide speed data to Saskatoon Police Service for enforcement	1 to 2 years	2018	Complete
26	Lorne Avenue between Taylor Street & 8 th Street	Provide speed data to Saskatoon Police Service for enforcement	1 to 2 years	2018	Complete
27	McPherson Avenue – 5 th Street to 6 th Street (school zone)	Speed study in spring 2018	1 to 2 years	2018 - 85 th percentile speed was 34 kph; no further recommendations	Complete
28	Lorne Avenue & 7 th Street	Traffic count in spring 2018; see if pedestrian improvements are needed	1 to 2 years	2018 - 6 pedestrians crossed Lorne Avenue during the 6-hour peak period; no further recommendations	Complete
29	7 th Street between Eastlake Avenue & Broadway Avenue	Traffic volume and speed study in spring 2018	1 to 2 years	2018 - 85 th percentile speed was 32 kph; no further recommendations	Complete
30	8 th Street - Poplar Crescent to Coy Avenue	Sidewalk on south side	5 years plus	TBD	On sidewalk retrofit list

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
31	Kilburn Avenue – 2 nd Street to 4 th Street	Sidewalk on west side	5 years plus	TBD	On sidewalk retrofit list
32	McPherson Avenue – 5 th Street to 7 th Street	Sidewalk on west side	5 years plus	TBD	On sidewalk retrofit list
33	6 th Street - Lorne Avenue to Coy Avenue	Sidewalk on south side	5 years plus	TBD	On sidewalk retrofit list
34	Lorne Avenue - from Taylor Street to 8 th Street	Upgrade southbound light fixture	3 to 5 years	TBD	To be coordinated with Saskatoon Light & Power

TABLE 2-28: DUNDONALD IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Latrace Road & Wedge Road	Curb extension and median island (south side), pedestrian crosswalk	3 to 5 years	Installed temporarily fall 2018	Permanent 2025
2	Latrace Road & Robinson Crescent (south)	Curb extensions and median islands (both sides), pedestrian crosswalk	3 to 5 years	Installed temporarily fall 2018	Permanent installation 2027
3	Latrace Road & Flavelle Crescent (north)	Curb extensions and median island (south side), pedestrian crosswalk	3 to 5 years	Installed temporarily fall 2018	Permanent installation 2026
4	Hunt Road & Sumner Crescent	Upgrade pavement markings to zebra crosswalk	1 to 2 years	2018	Complete
5	Wedge Road & Bowman Crescent	Upgrade pavement markings to zebra crosswalk	1 to 2 years	2018	Complete
6	Wedge Road & George Road	Zebra crosswalk (north side)	1 to 2 years	Added a median island; installed temporarily in 2018	Permanent installation 2022
7	Wedge Road & George Road	Restrict parking	1 to 2 years	2018	Complete
8	Wedge Road & George Road	Pedestrian accessibility ramp	5 years plus	TBD	On accessibility ramp list
9	George Road	Speed display board (facing southbound traffic between Makaroff Road and Wedge Road)	1 to 2 years	2019 or later	On speed display board list of locations for installation
10	37th Street & Junor Avenue	Lane designation signs for southbound traffic	1 to 2 years	2018	Complete
11	37th Street	Update speed hump signing	1 to 2 years	2019	Complete
12	Latrace Road	Update speed hump signing	1 to 2 years	2019	Complete

TABLE 2-29: ERINDALE – ARBOR CREEK IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	115 th Street between Berini Drive & Kenderdine Road	Speed Display Board facing westbound traffic	1 to 2 years	2018	Complete
2	North side of intersection of Berini Drive & Rogers Road	Speed Display Board facing southbound traffic	1 to 2 years	2019	Complete
3	Kenderdine Road & Perehudoff Crescent (west)	Pedestrian Ahead, Do Not Block Intersection, and pedestrian crosswalk signs	1 to 2 years	2018	Complete
4	Bentham Crescent (north) & Kenderdine Road	Zebra crosswalk	1 to 2 years	2018	Complete
5	Bentham Crescent (south) & Kenderdine Road	Curb extension	3 to 5 years	Installed temporarily fall 2018	Permanent 2027
6	Kenderdine Road between Brunst Crescent & Gillam Crescent	Speed Display Board facing northbound traffic	1 to 2 years	2019 or later	On speed display board list of locations for installation
7	30 m west of Kenderdine Road & Epp Avenue/ Mulcaster Crescent	Speed Display Board facing eastbound traffic	1 to 2 years	2019	Complete
8	Wickenden Crescent & Rogers Road	Make temporary curb extension permanent	3 to 5 years	Installed prior to Neighbourhood Traffic Review	Permanent 2025
9	Rogers Court & Rogers Road	Median island on east side	3 to 5 years	Installed temporarily fall 2018	Permanent 2023
10	Forsyth Way & Cowley Road	Modify the existing temporary curb extension	3 to 5 years	Installed temporarily fall 2018	Permanent 2025
11	Steiger Crescent/ Forsyth Crescent & Kenderdine Road	Median island on south side	3 to 5 years	Installed temporarily fall 2018	Permanent 2022
12	Kenderdine Road & Kerr Road (east)	Right Lane Must Turn Right sign, right turn arrow pavement marking (short-term)	1 to 2 years	2018	Complete
13	Kenderdine Road & Kerr Road (east)	temporary roundabout (mid-term)	3 to 5 years	TBD	Under review
14	McOrmond Drive & Kerr Road	Paint yellow guiding line for the westbound left turn	1 to 2 years	TBD	In progress
15	Stodola Court & Kenderdine Road	Median island on north side	3 to 5 years	Installed temporarily fall 2018	Permanent 2022
16	Kucey Crescent (west) & Kenderdine Road	Median island on west side and standard crosswalk on east side	3 to 5 years	Installed temporarily fall 2018	Permanent 2023

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
17	Kucey Crescent (east) & Kenderdine Road	Median island on east side and standard crosswalk on east side	3 to 5 years	Installed temporarily fall 2018	Permanent 2023
18	Beckett Green (north) & Kenderdine Road	Median island on south side	3 to 5 years	Installed temporarily fall 2018	Permanent 2023
19	Beckett Crescent (south) & Beckett Green	Curb extension on southwest corner and yield sign	3 to 5 years	Installed temporarily 2017	Permanent 2027
20	Cowley Road & Kerr Road	Make temporary curb extension permanent	3 to 5 years	Installed prior to Neighbourhood Traffic Review	Permanent 2026
21	319 Perehudoff Crescent	"No parking" signs and checkerboard signs	1 to 2 years	2018	Complete
22	Kenderdine Road (South of Kerr Road); Berini Drive; Kerr Road; 115 th Street; Perehudoff Crescent	Provide speed data to Saskatoon Police Service for enforcement	1 to 2 years	2018	Complete

TABLE 2-30: NORTH PARK – RICHMOND HEIGHTS IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Balmoral Street & 8 th Avenue	Upgrade standard crosswalk to a zebra crosswalk on the east leg; install curb extensions on the north and south sides of the east crosswalk	1 to 5 years	Installed temporarily fall 2018	Permanent 2025
2	Windsor Street & 9 th Avenue	Upgrade standard crosswalks to zebra crosswalks on the west and east legs	1 to 2 years	2018	Complete
3	Back Lane behind Former M.D. Ambulance	Traffic count in spring 2018	1 to 2 years	Based on field observations and a review of the 24 hour traffic count, three vehicles used this back lane and no safety issues were identified; no improvements are recommended	Complete
4	Edward Avenue (Windsor Street to Hazen Street)	Speed assessment in spring 2018	1 to 2 years	The 85 th percentile speed was measured to be 48 kph; no improvements are recommended	Complete
5	Windsor Street & Edward Avenue	Install zebra crosswalk on the west leg	1 to 2 years	2018	Complete
6	Edward Avenue (Balmoral Street to Windsor Street)	Speed assessment in spring 2018	1 to 2 years	The 85 th percentile speed was measured to be 37 kph during school hours and 39 kph outside of school hours; a speed display board for southbound traffic is recommended	On speed display board list of locations for installation
7	Alexandra Avenue & Eddy Place	Traffic count in spring 2018	1 to 2 years	Based on field observations and a review of the peak hour traffic counts, six pedestrians safely crossed this intersection with minimal delay. Pedestrians safely crossed during gaps in traffic or when vehicles stopped for them; no improvements are recommended	Complete
8	Hazen Street & Alexandra Avenue	Install Stop Ahead warning sign for eastbound traffic	1 to 2 years	2018	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
9	Windsor Street & Alexandra Avenue	Upgrade standard crosswalks to zebra crosswalks on all legs	1 to 2 years	2018	Complete
10	Balmoral Street (Edward Avenue to Alexandra Avenue)	Remove school zone	1 to 2 years	2018	Complete
11	Balmoral Street (Empress Avenue to Spadina Crescent)	Speed assessment in spring 2018	1 to 2 years	The 85 th percentile speed was measured to be 48 kph; no improvements are recommended	Complete
12	Spadina Crescent (Windsor Street to Balmoral Street)	Relocate 50 kph speed limit sign for southbound traffic closer to Windsor Street	1 to 2 years	2018	Complete
13	Spadina Crescent (Windsor Street to Balmoral Street)	Install speed display board for southbound traffic	1 to 2 years	2018	Complete
14	Spadina Crescent (33 rd Street to Oxford Street)	Install 50 kph speed limit sign for northbound traffic	1 to 2 years	2018	Complete
15	Spadina Crescent (33 rd Street to Oxford Street)	Install speed display board for northbound traffic	1 to 2 years	2019	Complete
16	Various	Install sidewalk	5 years plus	TBD	On sidewalk retrofit list
17	7 th Avenue & Balmoral Street	Install accessibility ramps on southwest and southeast corners	5 years plus	TBD	On accessibility ramp list

TABLE 2-31: PLEASANT HILL IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	20 th Street (Avenue T and Avenue U)	Install speed display board facing eastbound traffic	1 to 2 years	2018	Complete
2	20 th Street east of Avenue T	Install Right Turn Only Lane sign for westbound traffic	1 to 2 years	2018	Complete
3	20 th Street & Avenue S	Install Pedestrians Prohibited / Allowed / Arrow signs for northbound and southbound pedestrians on east leg	1 to 2 years	2018	Complete
4	20 th Street & Avenue S	Install zebra crosswalks on west and north legs	1 to 2 years	2018	Complete
5	20 th Street west of Avenue R	Remove Right Lane Ends warning sign on north side of 20 th Street for westbound traffic	1 to 2 years	2018	Complete
6	20 th Street & Avenue R	Install a "no parking" sign on south side of 20 th Street 15m west of Avenue R	1 to 2 years	2018	Complete
7	20 th Street (Avenue O and Avenue P)	Install School Ahead warning sign for eastbound traffic	1 to 2 years	2018	Complete
8	Avenue O (20 th Street and 21 st Street)	Install "2 Hour Parking" signs on west side of Avenue O	1 to 2 years	2018	Complete
9	20 th Street & Avenue O / Columbian Place	Relocate overhead School Ahead warning sign closer to traffic signal head	1 to 2 years	2018	Complete
10	20 th Street & Avenue O / Columbian Place	Install zebra crosswalk on west leg	1 to 2 years	2018	Complete
11	20 th Street & Avenue O / Columbian Place	Modify pedestrian signal timing	1 - 2 years	TBD	On signal upgrades list
12	20 th Street & Avenue N	Install zebra crosswalk on west leg	1 to 2 years	2018	Complete
13	21 st Street & Avenue M	Traffic count in spring 2018	1 to 2 years	Based on a review of the traffic count, an all-way stop is not warranted; no further recommendations	Complete
14	20 th Street & Avenue M	Relocate overhead School Ahead warning sign closer to traffic signal head	1 to 2 years	2018	Complete
15	20 th Street & Avenue M	Install zebra crosswalk on east leg	1 to 2 years	2018	Complete
16	20 th Street (Avenue L and Avenue M)	Install School Ahead warning sign for westbound traffic	1 to 2 years	2018	Complete
17	Avenue P & Affinity Credit Union Driveway	Install "2 Hour Parking" signs on east side of Avenue P north of Affinity Credit Union driveway	1 to 2 years	2018	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
18	Avenue P & Affinity Credit Union Driveway	Install "No Parking" signs on east side of Avenue P six meters from each side of Affinity Credit Union driveway	1 to 2 years	2018	Complete
19	18 th Street & Avenue Q	Remove Road Narrows warning sign and 20 kph Advisory Speed warning sign; Install stop sign for northbound traffic; Install "Local Traffic Only" sign for southbound traffic	1 to 2 years	2018	Complete
20	17 th Street & Back Lane south of 18 th Street	Install One-Way signs for southbound traffic; Install Curve warning sign and 20 kph Advisory Speed warning sign for southbound traffic	1 to 2 years	2018	Complete
21	17 th Street & Avenue S	Remove Road Narrows warning sign and 20 kph Advisory Speed warning sign; Install Entry Prohibited sign for eastbound traffic	1 to 2 years	2018	Complete
22	18 th Street & Avenue W	Traffic count in spring 2018	1 to 2 years	Based on a review of the count information, a pedestrian device is not warrant; no further recommendations	Complete
23	Avenue W (17 th Street and Appleby Drive)	Speed assessment in spring 2018	1 to 2 years	85 th percentile speeds were 49 kph; no further recommendations	Complete
24	South side of 21 st Street (Avenue U and Witney Avenue)	Install sidewalk	5 years plus	TBD	On sidewalk retrofit list
25	North side of 21 st Street (Avenue W and Witney Avenue)	Install sidewalk	5 years plus	TBD	On sidewalk retrofit list
26	North side of 21 st Street (Avenue I and Avenue P)	Install sidewalk	5 years plus	TBD	On sidewalk retrofit list

TABLE 2-32: QUEEN ELIZABETH – EXHIBITION IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	St. Henry Avenue & Hilliard Street	Median islands	3-5 years	Installed temporarily in 2018	Permanent 2027
2	Herman Avenue & Isabella Street	Median island and standard crosswalk on south side	3-5 years	Installed temporarily in 2018	Permanent 2021
3	Herman Avenue & Adelaide Street	15m parking restrictions on Herman Avenue on northwest (school) and southwest (park) corners	1-2 years	2018	Complete
4	Ruth Street & St. George Avenue	15m parking restrictions on Ruth Street on northwest corner	1-2 years	2018	Complete
5	Ruth Street & St. George Avenue	Move eastbound-facing Do Not Enter sign and replace with larger sign	1-2 years	Added channelized island; installed temporarily in 2018	Permanent 2026
6	Lorne Avenue & Taylor Street	Move bus stop on the southwest corner further south	1-2 years	2018	Complete
7	Lorne Avenue & Taylor Street	Move street name blades to same posts as stop signs	1-2 years	2018	Complete
8	Lorne Avenue & Taylor Street	Move westbound lane designation sign to more visible location and add pavement markings to show separated lanes for left turn and shared through / right turn lanes	1-2 years	2018	Complete
9	Eastlake Avenue & Maple Street	Curb extensions on northwest and southwest corners	3-5 years	Installed temporarily in 2018	Permanent 2026
10	Eastlake Avenue & Hilliard Street	Median islands with additional yield signs	3-5 years	Installed temporarily in 2018	Permanent 2025
11	Eastlake Avenue & Adelaide Street	Median island and zebra crosswalk on north side	3-5 years	Installed temporarily in 2018	Permanent 2025
12	Ruth Street	Speed display board (facing eastbound traffic prior to Weaver Park)	1-2 years	2019	Complete
13	Ruth Street between Lorne Avenue & Clarence Avenue	Provide speed data to Saskatoon Police Service for enforcement	1-2 years	2018	Complete
14	Taylor Street between Lorne Avenue & Clarence Avenue	Provide speed data to Saskatoon Police Service for enforcement	1-2 years	2018	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
15	Lorne Avenue between Ruth Street & Taylor Street	Provide speed data to Saskatoon Police Service for enforcement	1-2 years	2018	Complete
16	Herman Avenue between Hilliard St & Adelaide Street	Provide speed data to Saskatoon Police Service for enforcement	1-2 years	2018	Complete
17	Lane east of St. George Avenue between Taylor Street & Adelaide Street	Traffic count in spring 2018	1-2 years	2018	Count completed; review in progress
18	Lansdowne Avenue - Ruth Street to Adelaide Street	Speed study in spring 2018	1-2 years	85 th percentile speed was 44.9 kph; no further recommendations	Complete
19	Isabella Street & Lorne Avenue	Traffic count in spring 2018	1-2 years	2018 - Rectangular Rapid Flashing Beacon recommended	On pedestrian device prioritization list
20	Eastlake Avenue	Sidewalk on west side of Eastlake Avenue between Isabella Street and Willow Street	5 years plus	TBD	On sidewalk retrofit list
21	McPherson Avenue	Sidewalk on west side of McPherson Avenue between Ruth Street & Elm Street	5 years plus	TBD	On sidewalk retrofit list
22	Isabella Street	Sidewalk on south side of Isabella Street between Lorne Avenue and pathway into Thornton Park	5 years plus	TBD	On sidewalk retrofit list
23	St. Henry Avenue	Sidewalk on east side of St. Henry Avenue between Hilliard Street and Isabella Street	5 years plus	TBD	On sidewalk retrofit list

TABLE 2-33: SILVERWOOD HEIGHTS IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	West of Adilman Drive & Davies Road / Spencer Crescent (West)	Relocate 50 kph speed limit sign for eastbound traffic	1-2 years	2018	Complete
2	Adilman Drive & Neusch Crescent (West) / Egnatoff Crescent (West)	Install median island on west leg; provide speed data to Saskatoon Police Service for enforcement	3-5 years	Installed temporarily 2018	Permanent installation 2023
3	Adilman Drive & Neusch Crescent (West) / Egnatoff Crescent (West)	Traffic count in spring 2018	1-2 years	Based on field observations and a review of the peak hour traffic counts, pedestrians safely crossed during gaps in traffic or when vehicles stopped for them; no further recommendations	Complete
4	Marcotte Crescent (Marcotte Way to Marcotte Road)	Traffic count in spring 2018	1-2 years	Marcotte Crescent is classified as a local roadway intended to carry less than 1,000 vehicles per day. Based on a review of the traffic count, the Average Daily Traffic was measured to be 150 vehicles per day. No shortcutting issues were identified. No further recommendations.	Complete
5	Goerzen Street & Nordstrum Road	Install median island on west leg; provide speed data to Saskatoon Police Service for enforcement	3-5 years	Installed temporarily 2018	Permanent installation 2023
6	Russell Road & Girgulis Crescent (North)	Install curb extension on east side of north crosswalk; provide speed data to Saskatoon Police Service for enforcement	3-5 years	Installed temporarily 2018	Permanent installation 2020
7	Russell Road & Girgulis Crescent (North)	Upgrade to zebra crosswalk on north leg	1-2 years	2019	Complete
8	Russell Road & Goerzen Street	Upgrade to zebra crosswalk on south leg	1-2 years	2019	Complete
9	Russell Road & Davies Road	Upgrade to zebra crosswalk on north leg	1-2 years	2019	Complete
10	Verbeke Road & Verbeke Court / Verbeke Crescent (West)	Install yield signs assigning right-of-way to Verbeke Road	1-2 years	2018	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
11	Verbeke Road & Verbeke Place	Install yield sign assigning right-of-way to Verbeke Road	1-2 years	2018	Complete
12	Verbeke Road & Gathercole Crescent (West)	Install yield sign assigning right-of-way to Verbeke Road	1-2 years	2018	Complete
13	Verbeke Road & Verbeke Crescent (East) / Gathercole Crescent (East)	Install yield signs assigning right-of-way to Verbeke Road	1-2 years	2018	Complete
14	Molloy Street & Bain Crescent (West) / Kindrachuk Crescent (West)	Install median island on west leg; provide speed data to Saskatoon Police Service for enforcement		Installed temporarily 2018	Permanent installation 2023
15	Silverwood Road & Molloy Street / Perreault Crescent (South)	Paint stop lines for eastbound and westbound traffic	1-2 years	2019	Complete
16	Silverwood Road from Ball Crescent (North) to Ball Crescent (South)	Install School Ahead warning sign for southbound traffic; provide speed data to Saskatoon Police Service for enforcement	1-2 years	2018	Complete
17	Silverwood Road & Whiteswan Drive	Install median island on north leg; install curb extension on west side of north crosswalk; install curb extension on east side of south crosswalk; provide speed data to Saskatoon Police Service for enforcement	3-5 years	Installed temporarily 2018	Permanent installation 2025
18	Silverwood Road & O'Brien Crescent (East) / A.E. Adams Crescent (West)	Install median island on west leg; provide speed data to Saskatoon Police Service for enforcement	3-5 years	Installed temporarily 2018	Permanent installation 2023
19	Whiteswan Drive & A.E. Adams Crescent Walkway (West)	Install median island	3-5 years	Installed temporarily 2018	Permanent installation 2027
20	Whiteswan Drive from A.E. Adams Crescent Walkway (West) to A.E. Adams Crescent Walkway (East)	Install speed display board for eastbound traffic; provide speed data to Saskatoon Police Service for enforcement	1-2 years	2018	Complete
21	Whiteswan Drive & Wastewater Treatment Plant Access	Install curb extensions and median island on east leg	3-5 years	Installed temporarily 2018	Permanent installation 2025
22	Nordstrum Road (Allegretto Way to Nordstrum Court)	Speed assessment in spring 2018	1-2 years	The 85 th percentile speed was measured to be 44 kph	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
23	Allegretto Crescent (Allegretto Way to Nordstrum Road)	Speed assessment in spring 2018	1-2 years	The 85 th percentile speed was measured to be 39 kph; no further recommendations	Complete
24	Lenore Drive (Wanuskewin Road to Russell Road)	Provide speed data to Saskatoon Police Service for enforcement	1-2 years	2018	Complete
25	Lenore Drive & Russell Road / Primrose Drive	Install U-turn prohibited sign for eastbound traffic	1-2 years	2018	Complete
26	Lenore Drive & La Loche Road	Upgrade standard crosswalk to zebra crosswalk on the east leg	1-2 years	2019	Complete
27	Lenore Drive & La Loche Road	Install U-turn prohibited sign for westbound traffic	1-2 years	2018	Complete
28	Lenore Drive & Cypress Court	Upgrade standard crosswalk to zebra crosswalk on the east leg	1-2 years	2019	Complete
29	Lenore Drive from Cypress Court to Redberry Road (East)	Install speed display board for westbound traffic	1-2 years	2019	Complete
30	Lenore Drive from Cypress Court to Redberry Road (East)	Provide speed data to Saskatoon Police Service for enforcement	1-2 years	2018	Complete
31	Lenore Drive & Redberry Road (East)	Upgrade standard crosswalk to zebra crosswalk on west leg	1-2 years	2019	Complete
32	Lenore Drive & Redberry Road (East)	Install U-turn prohibited sign for eastbound traffic	1-2 years	2018	Complete
33	West side of Wanuskewin Road adjacent to Independent Grocer	Install sidewalk	5 years plus	TBD	On sidewalk retrofit list

TABLE 2-34: WILDWOOD IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Tim Hortons driveway on Moss Ave	Discuss driveway modification with property owner	1-2 years	2018	Complete
2	1035 Moss Avenue driveways	"No parking" signs	1-2 years	2018	Complete
3	Moss Avenue & Parkdale Road	"No parking" signs on northwest corner	1-2 years	2018	Complete
4	100 m east of Moss Avenue & Parkdale Road	Speed display board facing westbound traffic	1 – 2 years	2018	Complete
5	Parkdale Road & Rosedale Road	Relocate the standard crosswalk from Parkdale Road and Meglund Crescent to the east leg of this intersection and install curb extension	1 – 5 years	Installed temporarily in summer 2018	Permanent 2025
6	Rosedale Road & Tennant Crescent	Make temporary curb extension permanent	3 – 5 years	Installed temporarily prior to Neighbourhood Traffic Review	Permanent 2026
7	Rosedale Road & Schwager Crescent	Curb extension on south leg	1 – 5 years	Installed temporarily in summer 2018	Permanent 2026
8	Avondale Road & Richardt Place	Tree trimming and zebra crosswalk	1-2 years	2018	Complete
9	Bishop Pocock School entrance on Avondale Road	No stopping signs and zebra crosswalk	1-2 years	2018	Complete
10	Avondale Road & Penryn Crescent (west)	No parking signs on east leg	1-2 years	2018	Complete
11	Acadia Drive & Avondale Road	Tree trimming	1-2 years	TBD	In progress
12	50 m south of Acadia Drive & Haight Crescent (south)	Speed display board facing northbound traffic	1 – 2 years	2019 or later	On speed display board list of locations for installation
13	Circle Drive northbound off-ramp	Relocate the "Mall Traffic Only" sign and install lane pavement marking	1-2 years	2018	Complete
14	Taylor Street & Kingsmere Boulevard	Oversized "No U Turn" Sign for eastbound traffic	1-2 years	2018	Complete
15	Lakewood Civic Centre driveways	Accessibility ramps	5 years plus	TBD	On accessibility ramp list

TABLE 2-35: COLLEGE PARK – EAST COLLEGE PARK IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Cambridge Crescent & Harvard Crescent	Install yield sign	1 to 2 years	2019	Complete
2	Carleton Drive & Harvard Crescent	Install yield sign	1 to 2 years	2019	Complete
3	Carleton Drive & Acadia Drive	Active Pedestrian Corridor (APC) east side	3 to 5 years	TBD	On pedestrian device prioritization list
4	Carleton Drive & Acadia Drive	Curb extension on the northeast and southeast corners	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
5	Carleton Drive & Acadia Drive	Restrict parking on Acadia Drive at 15m from the northeast and northwest corners	1 to 2 years	2019	Complete
6	Acadia Drive	Restrict parking on Acadia Drive at 10m from all corners on Dalhousie Crescent and from the southwest corner on McGill Street	1 to 2 years	2019	Complete
7	Acadia Drive & Acadia Place	Restrict parking on Acadia Drive at 10m from all corners	1 to 2 years	2019	Complete
8	14 th Street & Spinks Drive / Carleton Drive	Rectangular Rapid Flashing Beacon (RRFB) and zebra crosswalk on west side	3 to 5 years	TBD	On pedestrian device prioritization list
9	14 th Street & Acadia Drive	Relocate north leg crosswalk and stop sign further north	1 to 2 years	2019	In progress
10	14 th Street & Acadia Drive	Restrict parking on Acadia Drive at 10m from the northwest and northeast corners	1 to 2 years	2019	Complete
11	Acadia Drive & McKercher Drive	Add to intersection improvement list	5 years +	TBD	On intersection improvement list
12	Boychuk Drive & McMaster Crescent / Waterloo Crescent (West)	Standard crosswalk and curb extensions on west side	1 to 2 years	2019	Complete
13	Boychuk Drive & McMaster Crescent / Waterloo Crescent (West)	Speed display board east of the intersection for eastbound traffic	1 to 2 years	TBD	On speed display board list

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
14	Boychuk Drive & McMaster Crescent / Waterloo Crescent (West)	Forward speed data to Saskatoon Police Service	1 to 2 years	2019	Complete
15	Boychuk Drive & McMaster Crescent / Waterloo Crescent (West)	Restrict parking on Boychuk Drive at 10m from the intersection	1 to 2 years	2019	Complete
16	Boychuk Drive & McMaster Crescent / Waterloo Crescent (East)	Median island, curb extensions and zebra crosswalk on east side	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
17	Boychuk Drive & McMaster Crescent / Waterloo Crescent (East)	Restrict parking on Boychuk Drive at 10m from the intersection	1 to 2 years	2019	Complete
18	Boychuk Drive & Laval Crescent (East)	Median island and curb extensions on west side	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
19	Boychuk roundabout	Curb extension for the northbound entrance to the roundabout	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
20	Boychuk roundabout	Relocate traffic signs	1 to 2 years	2019	Complete
21	Degeer Street & Boychuk Drive	Restrict parking at 10m from all corners	1 to 2 years	2019	Complete
22	Boychuk Drive & Laurentian Drive (South)	Restrict parking on Boychuk Drive at 10m from northeast and southeast corners	1 to 2 years	2019	Complete
23	Balfour Street & Harrington Street	Restrict parking at 10m from all corners	1 to 2 years	2019	Complete
24	Balfour Street & Harrington Street	Make temporary median islands permanent	3 to 5 years	TBD	Permanent installation anticipated after 2028
25	Balfour Street & Harrington Street	Rectangular Rapid Flashing Beacon (RRFB) and zebra crosswalk on east side	3 to 5 years	TBD	On pedestrian device prioritization list
26	Balfour Street & Harrington Street	Replace yield signs with stop signs	1 to 2 years	2019	Complete
27	Mount Allison lane	Install posted speed sign (20 kph) westbound	1 to 2 years	2019	Complete
28	Mount Allison lane	Add walkway from Mount Allison lane to schools to walkway improvement list	3 to 5 years	TBD	On walkway improvement list
29	Anderson Crescent lane	Additional posted speed sign (20 kph) eastbound	1 to 2 years	2019	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
30	Anderson Crescent lane	Speed bumps	1 to 2 years	Installed 2019	Complete
31	McKercher Drive & Degeer Street	Traffic signal	3 to 5 years	TBD	On traffic control upgrades list
32	Degeer Street & Trent Crescent	Active Pedestrian Corridor (APC) east side	3 to 5 years	TBD	On pedestrian device prioritization list
33	Degeer Street & Trent Crescent	Restrict parking at 10 m from all corners	1 to 2 years	2019	Complete
34	McKercher Drive & Edinburgh Place	Active Pedestrian Corridor (APC) and accessible pedestrian ramps on south side	3 to 5 years	TBD	On pedestrian device prioritization list
35	McKercher Drive	Speed display board between Mount Allison Crescent and Boychuk Drive (northbound and southbound)	1 to 2 years	TBD	On speed display board list
36	McKercher Drive	Forward speed data to Saskatoon Police Service	1 to 2 years	2019	Complete
37	Lane connecting Harrington Street to Evan Hardy Collegiate parking lot	Discuss driveway access with Evan Hardy Collegiate	1 to 2 years	TBD	Scheduled to begin in 2020
38	Boychuk Drive & McKercher Drive	Adjust traffic signal timing	1 to 2 years	TBD	Scheduled to begin in 2020
39	Acadia Drive & 8 th Street	Adjust traffic signal timing	1 to 2 years	TBD	Scheduled to begin in 2020
40	Acadia Drive & 8 th Street	Add pedestrian signal on west side	3 to 5 years	TBD	On traffic signal upgrades list
42	Acadia Drive & 8 th Street	Overhead lane designation signs for southbound approach	1 to 2 years	TBD	Scheduled to begin in 2020
42	McKercher Drive & 8 th Street	Adjust traffic signal timing	1 to 2 years	TBD	Scheduled to begin in 2020

TABLE 2-36: EASTVIEW – NUTANA SUBURBAN CENTRE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Arlington Avenue & Louise Street (north leg)	Change yield control on Louise Street to stop control	1 to 2 years	2019	Complete
2	Arlington Avenue & Louise Street (north leg)	Median island on Louise Street	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
3	Arlington Avenue & Porter Street	Change yield control on Porter Street to stop control	1 to 2 years	2019	Complete
4	Arlington Avenue & Porter Street	Install Rectangular Rapid Flashing Beacon (south side)	3 to 5 years	TBD	On pedestrian device prioritization list
5	Louise Street & McEown Avenue/600 East Place	All-way stop	1 to 2 years	2019	Complete
6	Louise Street & McEown Avenue/600 East Place	Standard crosswalk on all four legs	1 to 2 years	2019	Complete
7	Louise Street & McEown Avenue/600 East Place	Improve pedestrian ramps	5 years +	TBD	On accessibility ramp list
8	Arlington Avenue & East Drive/1700 East Heights	Install zebra crosswalk and improve sign placement	1 to 2 years	2019	Complete
9	Arlington Avenue & 1800 Easthill	Make existing median island permanent	3 to 5 years	Installed temporarily 2019	Permanent installation anticipated after 2028
10	Arlington Avenue & 1800 Easthill	Additional median island on Arlington Avenue south of 1800 Easthill	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
11	Arlington Avenue & 2300 Easthill	Median island (west leg of intersection)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
12	Arlington Avenue & 1100 East Centre	Median island (west leg of intersection)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
13	Arlington Avenue & 2700 Eastview	Median island (east leg of intersection)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
14	Arlington Avenue & 3100 Eastview	Median island (east leg of intersection)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
15	Arlington Avenue between 3100 Eastview & 2700 Eastview	Speed display board (westbound)	1 to 2 years	TBD	On speed display board list
16	Alley behind 2700, 2600, & 2500 Eastview	20 kph speed limit signs (3)	1 to 2 years	2019	Complete
17	Preston Avenue & East Drive	Active Pedestrian Corridor (north side)	3 to 5 years	2019	Complete
18	Preston Avenue & Adelaide Street	Traffic Signals	3 to 5 years	2019	Complete
19	Louise Street & Preston Avenue	Consolidate mall and gas station access as opportunities arise	5 years +	TBD	In progress

TABLE 2-37: FAIRHAVEN IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Fairlight Drive from Pendygrasse Road to Olmstead Road	Speed display boards (both directions)	1 to 2 years	TBD	On speed display board list
2	Fairlight Drive from Pendygrasse Road to Olmstead Road)	Forward speed data to Saskatoon Police to consider for further enforcement	1 to 2 years	2019	Complete
3	Fairlight Drive & Gropper Crescent	Active Pedestrian Corridor (west leg)	3 to 5 years	TBD	On pedestrian device prioritization list
4	Fairlight Drive between Diefenbaker Drive and Fairmont Drive	Install "no parking" signs (north side)	1 to 2 years	2019	In progress
5	Fairlight Drive from Fairlight Crescent to Fairmont Drive	Speed display boards (both directions)	1 to 2 years	TBD	On speed display board list
6	Fairlight Drive from Fairlight Crescent to Fairmont Drive	Forward speed data to Saskatoon Police to consider for further enforcement	1 to 2 years	2019	Complete
7	Fairmont Drive & Forrester Road	Curb extension on northwest corner	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
8	Clancy Drive & Fairmont Drive	Median island on the west leg	1 to 2 years	2019	In progress
9	Clancy Drive & Fairmont Drive	Channelized island on northeast corner	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
10	Clancy Drive between Fairmont Drive and Circle Drive	Lane designation signs (westbound)	1 to 2 years	2019	In progress
11	Forrester Road & Cooper Crescent (west)	Zebra crosswalk (northeast leg)	1 to 2 years	2019	In progress
12	Forrester Road & Cooper Crescent (east)	Active Pedestrian Corridor (northeast leg)	3 to 5 years	TBD	On pedestrian device prioritization list
13	Forrester Road & Olmstead Road	Curb extension on the northwest corner of Forrester Road	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
14	Forrester Road & Olmstead Road	Curb extension on the northeast corner of Olmstead Road	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
15	Forrester Road & Olmstead Road	Standard crosswalk (northwest leg)	1 to 2 years	2019	In progress
16	Priel Pace	Install cul-de-sac sign	1 to 2 years	2019	In progress
17	Pendygrasse Road between Fairlight Drive to Henigman Place	Speed Study	1 to 2 years		To be scheduled for 2020
18	Pendygrasse Road in front of St. Mark School	Active Pedestrian Corridor	3 to 5 years	2019	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
19	Pendygrasse Road in front of St. Mark School	Remove median island	3 to 5 years		Removal in 2021
20	Pendygrasse Road between Forrester Road to Clancy Drive	Speed study	1 to 2 years		To be scheduled for 2020
21	Diefenbaker Drive & Fairlight Drive	Add to Intersection Improvement list	1 to 2 years		On intersection improvement list
22	Fairlight Drive & Fairmont Drive	Add to intersection improvement list	1 to 2 years		On intersection improvement list
23	Fairmont Drive & Fairlight Crescent	Stop sign (east leg)	1 to 2 years	2019	In progress

TABLE 2-38: FOREST GROVE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Berini Drive & Rogers Road	Curb extension on the northeast corner	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
2	Berini Drive & Rogers Road	Advance pedestrian crosswalk sign for southbound traffic	1 to 2 years	2019	Complete
3	Berini Drive Rogers Road to Kerr Road	Speed display board (southbound traffic)	1 to 2 years	TBD	On speed display board list
4	Berini Drive Rogers Road to Kerr Road	Forward speed data to Saskatoon Police Service to consider for further enforcement	1 to 2 years	2019	Complete
5	115 th Street & Boyd Street	Tree trimming on southeast corner	1 to 2 years	2020	To be scheduled
6	Vickies Avenue 115 th Street &	Active Pedestrian Corridor (east leg)	3 to 5 years	TBD	On pedestrian device prioritization list
7	Vickies Avenue 115 th Street &	Relocate south side transit stop approximately 90m to the east, east of 115 th Street and Vickies Avenue	3 to 5 years	TBD	To be coordinated with Active Pedestrian Corridor installation
8	115 th Street between Laura Avenue and Dunlop Street	Install missing sidewalk and pedestrian ramps on the south side of 115 th Street	5 years +	TBD	On sidewalk retrofit list
9	115 th Street & Kellough Road	Rectangular Rapid Flashing Beacon (west leg)	3 to 5 years	TBD	On pedestrian device prioritization list
10	115 th Street & Kellough Road	Remove standard crosswalk (east leg)	3 to 5 years	2019	In progress
11	Kellough Road & Constain Place	Upgrade standard crosswalk on the south leg of Kellough Road to a zebra crosswalk	1 to 2 years	2019	In progress
12	Kellough Road & Addie Crescent (south intersection)	Upgrade standard crosswalk on the north leg of Kellough Road to a zebra crosswalk	1 to 2 years	2019	In progress
13	Gray Avenue & Cruise Street	Median island on southeast leg of Gray Avenue	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
14	Gray Avenue & James Street	Median island on northwest leg of Gray Avenue	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
15	Gray Avenue Fitzgerald Street to Grant Street	Speed display board (both directions)	1 to 2 years	TBD	On speed display board list

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
16	Gray Avenue Fitzgerald Street to Grant Street	Forward speed data to Saskatoon Police Service to consider for further enforcement	1 to 2 years	2019	Complete
17	Rossmo Road & Bradwell Avenue	Median islands on east and west legs of Rossmo Road	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
18	Rossmo Road & Pitt Avenue	Median islands on east and west legs of Rossmo Road	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
19	Rossmo Road/Forest Drive (Rossmo Road to Spruce Drive)	Relocate advisory speed sign for southbound traffic	1 to 2 years	2019	Complete
20	Rossmo Road/Forest Drive & Spruce Drive	Advance pedestrian crossing sign for southbound traffic	1 to 2 years	2019	Complete
21	Rossmo Road/Forest Drive & Spruce Drive	Standard crosswalk on the south leg of Rossmo Road/Forest Drive	1 to 2 years	2019	In progress
22	Central Avenue between Rossmo Road and 116 th Street	Speed display boards (both directions)	1 to 2 years	TBD	On speed display board list
23	Central Avenue between Rossmo Road and 116 th Street	Forward speed data to Saskatoon Police Service to consider for further enforcement	1 to 2 years	2019	Complete
24	Spark Avenue & Evans Street	Tree trimming on north corner	1 to 2 years	2020	To be scheduled
25	Grant Street between half a block northeast from Spark Avenue to cul-de-sac	Install missing sidewalk	5 years +	TBD	On sidewalk retrofit list
26	Various Locations	Install yield signs as indicated on the Forest Grove Traffic Plan map	1 to 2 years	2019	Complete
27	Central Avenue & Rossmo Road/Reid Road	Review the traffic patterns changes due to the Chief Mistawasis Bridge and McOrmond Interchange opening	1 to 2 years	2019	Complete
28	Attridge Drive & Berini Drive	Review the traffic patterns changes due to the Chief Mistawasis Bridge and McOrmond Interchange opening	1 to 2 years	2019	Complete
29	Central Avenue & 115 th Street	On the intersection improvement review list; continue to monitor this intersection			On intersection improvement list

TABLE 2-39: MASSEY PLACE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Confederation Drive & Milton Street	Traffic signals	3 to 5 years	TBD	On traffic control upgrades list
2	Confederation Drive & Massey Drive	Active Pedestrian Corridor (north leg)	3 to 5 years	2019	Complete
3	Milton Street & Northumberland Avenue	Median island (west leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
4	Milton Street & Northumberland Avenue	Speed display board (westbound traffic)	1 to 2 years	TBD	On speed display board list
5	Northumberland Avenue & Mackie Crescent (south intersection)	Median island (southwest leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
6	Massey Drive & Northumberland Avenue	Stop ahead warning sign (eastbound direction)	1 to 2 years	2019	Complete
7	Vickies Avenue 115th Street &	Median island (northeast leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
8	115th Street between Laura Avenue and Dunlop Street	Restrict parking north side at 15m north of existing pedestrian crosswalk	1 to 2 years	2019	Complete
9	115th Street & Kellough Road	Pedestrian accessibility ramps	5 years +	TBD	On accessibility ramp list
10	Mackie Crescent & Northumberland Avenue (north intersection)	Stop signs for Mackie Crescent	1 to 2 years	2019	Complete
11	Kellough Road & Constain Place	Restrict parking at 10m from south corner	1 to 2 years	2019	Complete
12	Northumberland Avenue between Moore Place and McKay Place	Median island	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
13	Gray Avenue & Cruise Street	Remove and install single curve sign facing northbound traffic	1 to 2 years	2019	Complete
14	Yield Infill	Various (shown as red triangles on Exhibit ES-1)	1 to 2 years	2019	Complete
15	33rd Street and Northumberland Avenue / Catherwood Avenue	On traffic signal priority list		2019	On traffic control upgrades list

TABLE 2-40: RIVER HEIGHTS IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Churchill Drive & Ravine Drive/Ravine Court	4-way stop control	1 to 2 years	2019	Complete
2	Churchill Drive & Ravine Drive/Ravine Court	Zebra crosswalk	1 to 2 years	2019	Complete
3	Churchill Drive & Ravine Drive/Ravine Court	Median island (all legs)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
4	Churchill Drive & Ravine Drive/Ravine Court	Pedestrian ramp installation		TBD	On accessibility ramp list
5	Ravine Drive & Churchill Court	Curb extensions (all legs)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
6	Ravine Drive & Churchill Court	Pedestrian ramp installation (west leg)	5 years +	TBD	On accessibility ramp list
7	Assiniboine Drive & St. Lawrence Crescent	Median island with curb extensions (east leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
8	Assiniboine Drive & St. Lawrence Crescent	Zebra crosswalk markings	1 to 2 years	2019	Complete
9	Assiniboine Drive & Albany Crescent	Median island (east leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
10	Assiniboine Drive & Albany Crescent)	Remove standard crosswalk (west leg)	1 to 2 years	2019	Complete
11	Assiniboine Drive & Nahanni Drive	Median island (east and west leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
12	Assiniboine Drive & Nahanni Drive	Standard crosswalk (west leg)	1 to 2 years	2019	Complete
13	Assiniboine Drive/Sandy Court & Saguenay Drive	4-way stop	1 to 2 years	2019	Complete
14	Spadina Crescent & extension of Sandy Court	Zebra crosswalk	1 to 2 years	2019	Complete
15	Spadina Crescent & extension of Sandy Court	Pathway connection from Sandy Court to Spadina Crescent sidewalk	5 years +	TBD	On sidewalk retrofit list
16	Spadina Crescent & extension of Sandy Court	Pedestrian ramp installation (west side)	5 years +	TBD	On accessibility ramp list
17	Ravine Drive	Install 50 kph speed limit sign (NB)	1 to 2 years	2019	Complete
18	Spadina Crescent & Pembina Avenue	Install Rectangular Rapid Flashing Beacon (RRFB)	3 to 5 years	TBD	On pedestrian device prioritization list
19	Spadina Crescent north of Pembina Avenue	Speed display board (both directions)	1 to 2 years	TBD	On speed display board list
20	Spadina Crescent near Meewasin parking lot	Speed display board (facing southbound traffic)	1 to 2 years	TBD	On speed display board list
21	Yield infill	Various	1 to 2 years	2019	Complete

TABLE 2-41: RIVERSDALE IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Spadina Crescent & Avenue C	Make curb extension on the northwest corner permanent	3 to 5 years	TBD	Permanent installation anticipated after 2028
2	Spadina Crescent & Avenue D	Make curb extension on the northwest corner permanent	3 to 5 years	TBD	Permanent installation anticipated after 2028
3	Spadina Crescent & Avenue E	Install curb extension on the northeast corner	1 to 2 years	Temporary in 2019	In progress
4	Spadina Crescent & 17 th Street	Intersection realignment	3 to 5 years	Temporary in 2019	In progress
5	Back lane behind Avenue H between 18 th Street and 19 th Street	Install 20 kph speed signs (both directions)	1 to 2 years	2019	In progress
6	19 th Street & Avenue F	Median island (east and west leg)	1 to 2 years	Temporary in 2019	In progress
7	20 th Street & Avenue K	Active Pedestrian Corridor (west leg)	3 to 5 years	TBD	On pedestrian device prioritization list
8	20 th Street Avenue H - Avenue K	Speed display board on 20 th Street between Avenue I and Avenue J (facing westbound)	1 to 2 years	TBD	On speed display board list
9	20 th Street Avenue H - Avenue K	Forward speed data to Saskatoon Police Service	1 to 2 years	2019	Complete
10	20 th Street and Avenue I	Install a "no parking" sign 10m from all corners of the intersection	1 to 2 years	2019	In progress
11	20 th Street & Avenue H	Install a "no parking" sign 15m from the intersection on the northeast corner	1 to 2 years	2019	In progress
12	Avenue H 20 th Street - 22 nd Street	Relocate existing school sign (northbound) approximately 45m further north	1 to 2 years	2019	In progress
13	Avenue H 20 th Street - 22 nd Street	Make curb extensions in front of Princess Alexandra School permanent	3 to 5 years	TBD	Permanent installation anticipated after 2028
14	Avenue H 20 th Street - 22 nd Street	Speed display board (both directions)	1 to 2 years	TBD	On speed display board list
15	Avenue H 20 th Street - 22 nd Street	Forward speed data to Saskatoon Police Service	1 to 2 years	2019	Complete
16	Avenue H 20 th Street - 22 nd Street	Tree trimming for overhead pedestrian crossing signs	1 to 2 years	TBD	To be scheduled
17	21 st Street & Avenue F	Make curb extensions permanent	3 to 5 years	TBD	Additional engagement requested

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
18	21 st Street & Avenue F	4-way stop	1 to 2 years	TBD	Additional engagement requested
19	20 th Street & Avenue F	Install a "no parking" sign 10m from all corners of the intersection	1 to 2 years	2019	In progress
20	20 th Street & Avenue E	Active pedestrian corridor (east leg)	3 to 5 years	TBD	On pedestrian device prioritization list
21	20 th Street / Auditorium Avenue / 22 nd Street and Idylwyld Drive	Review traffic signal timing (part of the Imagine Idylwyld project)	3 to 5 years	TBD	
22	18 th Street 400 block Avenue E to Avenue D	Sidewalk on north side	5 years +	TBD	On sidewalk retrofit list
23	18 th Street 600 block Avenue G to Avenue F	Sidewalk on north side	5 years +	TBD	On sidewalk retrofit list
24	18 th Street 700 block Avenue H to Avenue G	Sidewalk on north side	5 years +	TBD	On sidewalk retrofit list
25	18 th Street 800 block Avenue I to Avenue H	Sidewalk on north side	5 years +	TBD	On sidewalk retrofit list
26	18 th Street 1000 block Avenue K to Avenue J	Sidewalk on north side	5 years +	TBD	On sidewalk retrofit list
27	18 th Street 1100 block Avenue L to Avenue K	Sidewalk on north side	5 years +	TBD	On sidewalk retrofit list
28	Avenue J 200 block 20 th Street to north end	Sidewalk on west side	5 years +	TBD	On sidewalk retrofit list
29	Avenue J 200 block 20 th Street to north end	Sidewalk on east side	5 years +	TBD	On sidewalk retrofit list
30	Avenue J 400 block 18 th Street to 19 th Street	Sidewalk on west side	5 years +	TBD	On sidewalk retrofit list
31	21 st Street 600 block Avenue G to Avenue F	Sidewalk on south side	5 years +	TBD	On sidewalk retrofit list
32	21 st Street 500 block Avenue F to Avenue E	Sidewalk on south side	5 years +	TBD	On sidewalk retrofit list
33	17 th Street & Avenue G	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list
34	17 th Street & Avenue H	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list
35	18 th Street & Avenue F	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list
36	18 th Street & Avenue G	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list
37	17 th Street & Avenue J	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list
38	19 th Street & Avenue I	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list
39	19 th Street & Avenue K	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
40	21 st Street & Avenue B	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list
41	21 st Street & Avenue D	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list
42	21 st Street & Avenue E	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list
43	21 st Street & Avenue F	Install pedestrian accessible ramps	5 years +	TBD	On accessibility ramp list

TABLE 2-42: WESTVIEW IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Junor Avenue & Peterson Crescent / Ward Road	Median island (north leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
2	Junor Avenue & Peterson Crescent / Ward Road	Replace yield signs with stop signs	1 to 2 years	2019	Complete
3	Junor Avenue & Peterson Crescent / Ward Road	Traffic count in spring 2019	1 to 2 years	2019	Review underway
4	Junor Avenue & Richardson Road	Zebra crosswalk (south leg)	1 to 2 years	2019	Complete
5	Junor Avenue & Richardson Road	Median island (south leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
6	Junor Avenue & Makaroff Road	Median island (north leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
7	Junor Avenue & Makaroff Road	Replace yield sign with stop sign	1 to 2 years	2019	Complete
8	Junor Avenue & Carrothers Court	Replace yield sign with stop sign	1 to 2 years	2019	Complete
9	37 th Street & pathway east of Byers Crescent	Additional pedestrian crosswalk signs	1 to 2 years	2019	Complete
10	37 th Street & pathway east of Byers Crescent	Make temporary curb extension permanent (north side)	3 to 5 years	TBD	Permanent installation anticipated after 2028
11	Byers Crescent & Selkirk Crescent (south intersection)	Make temporary curb extension permanent (east side)	3 to 5 years	TBD	Permanent installation anticipated after 2028
12	Byers Crescent & Selkirk Crescent (south intersection)	Restrict parking on Byers Crescent (west side) at 10m from northwest and southwest corners	1 to 2 years	2019	Complete
13	Byers Crescent & Selkirk Crescent (south intersection)	Curb extensions on northwest and southwest corners on Byers Crescent	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
14	Byers Crescent & Selkirk Crescent (south intersection)	Pedestrian accessibility ramps on east side of Byers Crescent	5 years +	TBD	On accessibility ramp list
15	Richardson Road & Byers Crescent	Curb extensions on northeast and southeast corners on Richardson Road	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
16	Hnatyshyn Avenue & Nicholson Place	Median island (north leg)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
17	Hnatyshyn Avenue & Nicholson Place	Zebra crosswalk (north leg)	1 to 2 years	2019	Complete

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
18	Richardson Road & Avenue W North	Three-way stop	1 to 2 years	2019	Complete
19	Richardson Road & Avenue W North	Pedestrian accessibility ramps		TBD	On accessibility ramp list
20	Avenue W & Byers Crescent	Zebra crosswalk (south leg)	1 to 2 years	2019	Complete
21	Avenue W & Byers Crescent	Curb extension (east side of Avenue W)	1 to 2 years	Installed temporarily 2019	Permanent installation anticipated after 2028
22	Avenue W & Byers Crescent	Pedestrian accessibility ramps	5 years +	TBD	On accessibility ramp list
23	Curve west of Richardson Road & Wentworth Crescent	Curve warning sign and 30 kph advisory speed tab sign in the eastbound and westbound directions	1 to 2 years	2019	Complete
24	37 th Street & Richardson Road	Four-way stop	1 to 2 years	2019	Complete
25	37 th Street & Richardson Road	Pedestrian accessibility ramps	5 years +	TBD	On accessibility ramp list
26	33 rd Street & Junor Avenue	Restrict parking on west side of Junor Avenue for 30m north of 33 rd Street	1 to 2 years	2019	Complete
27	33 rd Street & Junor Avenue	Restrict parking on north side of 33 rd Street for 20m east of Junor Avenue	1 to 2 years	2019	Complete
28	33 rd Street & Avenue W	Install Right Lane Ends warning sign for westbound traffic	1 to 2 years	2019	Complete
29	33 rd Street & Catherwood Avenue / Northumberland Avenue	On Traffic Signal priority list	3 to 5 years	2019	On traffic control upgrades list

TABLE 2-43: HUDSON BAY INDUSTRIAL AND NORTH INDUSTRIAL IMPLEMENTATION STATUS

Item	Location	Proposed Measure	Time Frame	Installation Date	Status
1	Millar Avenue between 51 st Street & 60 th Street	Install speed display board north side of 52nd Street facing the northbound direction	1-2 years	2019	Complete
2	Millar Avenue between 51 st Street & 60 th Street	Install speed display board south of 60 th Street facing the southbound direction	1-2 years	2019 or later	On speed display board list of locations for installation
3	Millar Avenue between 51 st Street & 60 th Street	Forward peak hour speed data to Saskatoon Police Service to consider enforcement	1-2 years	2018	Complete
4	Millar Avenue & 52nd Street	Wait until pilot RRFB project at Millar and 43rd to implement first before this one implement (review for Rectangular Rapid Flashing Beacons (RRFB))	1-2 years	2019 or later	To be evaluated since RRFB pilot project is complete
5	2922 Millar Avenue	Increase parking enforcement	1-2 years	Forwarded to parking services for enforcement	Ongoing
6	Faithfull Crescent	Increase parking enforcement	1-2 years	Forwarded to parking services for enforcement	Ongoing
7	706 Circle Drive (Super 8 Motel) back lane	Install 20 kph signs; reduce driver speed	1-2 years	2018 or 2019	Complete
8	400 Block of 42nd A Street back lane	Install 20 kph signs; reduce driver speed	1-2 years	2018 or 2019	Complete
9	709 Circle Drive (Tim Hortons driveway)	Install stop sign	1-2 years	2018	Complete
10	Millar Avenue & 43rd Street	Review for Rectangular Rapid Flashing Beacons	1-2 years	2018 - installed as part of the RRFB pilot project; APC recommended	On pedestrian device prioritization list
11	Millar Avenue & 43rd Street	Install Do not Block Intersection signs and Pedestrian Ahead signs	1-2 years	2018 or 2019	Complete
12	48th Street & Wentz Avenue	Install "no parking" signs on Wentz Avenue 10m from intersection on northwest and southeast corner	1-2 years	2018 or 2019	Complete
13	50th Street & Wentz Avenue	Install "no parking" signs on Wentz Avenue 10m from intersection on northwest and southeast corner	1-2 years	2018 or 2019	Complete
14	2250 Northridge Drive	Install "no parking" signs and 30 kph warning sign	1-2 years	2018 or 2019	Complete
15	Faithfull Avenue between Circle Drive and 60th Street	Restrict on-street parking from Circle Drive to 60th Street, resulting in an additional travel lane in each direction	1-2 years	2019	Complete

3. 2019 TO 2027 RECOMMENDED PERMANENT INSTALLATIONS

This section of the status report provides details on the outstanding list of temporary traffic calming measures installed and awaiting permanent installation. The traffic calming devices will be installed permanently based on the following criteria:

1. Traffic calming devices temporarily installed prior to the NTR.
2. Locations adjacent to schools or parks.
3. Locations addressing speeding or shortcutting issues.
4. Year of the NTR.
5. Locations that lead to a school or park.
6. Low cost devices that fit within budget.

Details of the permanent traffic calming implementation timing and cost estimates are provided in Table 3-1. As evident by the number of locations listed in the table, permanent installations are taking longer than the 5 years initially estimated to complete. In addition to the permanent traffic calming devices, sidewalks and ramps need to be constructed. Sidewalks and accessible ramps are included as part of the Active Transportation Program and will be prioritized and implemented through the Active Transportation Capital Project.

Follow-up studies are still being completed for many of the temporary installation. Based on the results of the follow-up studies, the list of permanent installations is subject to change.

TABLE 3-1: ESTIMATED COST FOR PERMANENT TRAFFIC CALMING CONSTRUCTION

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
Mayfair-Kelsey-Woodlawn	34 Street & Avenue E	2			\$90,000					
Brevoort Park	Arlington Avenue & Early Drive	1					\$90,000			
Caswell Hill	Avenue D & 23 rd Street	1				\$90,000				
	Avenue F & 31 st Street	2			\$90,000					
Hudson Bay Park	Avenue I & 34 th Street		1				\$5,000			
Nutana	Saskatchewan Crescent - Idylwyld Crescent to 8 th Street	1				\$45,000				
	Temperance Street & Lansdowne Avenue	2	1			\$95,000				
	Temperance Street / Lansdowne Avenue & 14 th Street					\$90,000				
	18 th Street & University Drive	1					\$45,000			
Varsity View	14 th Street & McKinnon Avenue	2								\$90,000
Westmount	29 th Street & Avenue L	2					\$90,000			
Adelaide-Churchill	Wilson Crescent & Mackenzie Crescent	2			\$90,000					
	Wilson Crescent & Macdermid Crescent	2				\$90,000				
Avalon	Wilson Crescent & Harrison Crescent (north)	2				\$45,000				
	Wilson Crescent & Harrison Crescent (south)	2				\$45,000				

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
Avalon	Glasgow Street & Turner Avenue	1	1			\$50,000				
	Glasgow Street & Maceachern Avenue	2						\$90,000		
Greystone Heights	Arlington Avenue & Mitchell Street	1	1			\$50,000				
Lakeview	Kingsmere Boulevard & Wakaw Crescent	2					\$90,000			
Mount Royal	Avenue W & Rylston Road	2			\$90,000					
Grosvenor Park	14 th Street & Leslie Avenue		1		\$5,000					
	14 th Street & Bate Crescent		1		\$5,000					
	Lake Crescent & Leslie Avenue		1				\$5,000			
	Leslie, between Garrison Crescent and Copland Crescent		1		\$5,000					
	Copland Crescent, midblock in front of Misbah School	2			\$90,000					
Hampton Village	McClocklin Road & West Hampton Boulevard		1				\$5,000			
	West Hampton Boulevard & Geary Crescent		1					\$5,000		
	McClocklin Road & McKague Crescent	2	1							\$95,000
	Hampton Circle & Klassen Crescent		1					\$5,000		
	Hampton Circle & Hampton Gate North		4			\$20,000				

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
Hampton Village	Hampton Circle & East Hampton Boulevard		2				\$10,000			
	Hampton Circle & West Hampton Boulevard		2					\$10,000		
	East Hampton Boulevard & Korol Crescent		2				\$10,000			
	Richardson Road & McClocklin Road		1				\$5,000			
	McClocklin Road & Sumner Crescent	2						\$90,000		
	Richardson Road & 37 th Street		2			\$10,000				
Lakeridge	Emmeline Road & Swan Crescent (west)	1	1					\$50,000		
	Emmeline Road (at midblock crosswalk)	1	1					\$50,000		
	Nemeiben Road & Brudell Road	1	1			\$50,000				
	Nemeiben Road & Smoothstone Crescent (East)	1	1			\$50,000				
	Nemeiben Road & Waterbury Road		1		\$5,000					
Parkridge	McCormack Road & Needham Crescent (East) / Fairburn Court	2	1					\$95,000		
Silverspring	Konihowski Road & Rever Road		2				\$5,000			
	Konihowski Road & Pezer Crescent (North)		1				\$5,000			
Silverspring	Garvie Road & Scissons Crescent		1		\$5,000					
	Garvie Road & McWillie Avenue		1		\$5,000					

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	2020	Project Budget Year (subject to available funding)				
						2021	2022	2023	2024	Beyond 2024
	Konihowski Road & Haslam Place / McWillie Avenue		1			\$5,000				
	Rever Road & Haslam Street / Fairbrother Crescent (South)		1			\$5,000				
	Rever Road & Haslam Crescent / Fairbrother Crescent (North)		1			\$5,000				
Stonebridge	Vic Boulevard & Assaly Street	2	2						\$100,000	
	Vic Boulevard (Assaly Street to Hunter Road)			Speed Cushion		\$20,000				
	Vic Boulevard & Teal Crescent / Pringle Crescent	2	1							\$95,000
	Pringle Crescent & Pringle Lane		1				\$5,000			
	Galloway Road & McIntosh Street	2	1						\$95,000	
	Gordon Road & MacInnes Street / Holmes Crescent	2							\$90,000	
	Hunter Road & Teal Crescent	2						\$90,000		
	Hunter Road & Rempel Manor	1					\$50,000			
	Stonebridge Common & Brainerd Crescent	1								\$50,000
	Stonebridge Common & Snell Crescent	1				\$50,000				
Sutherland Sutherland	Reid Road & Reid Road		1				\$5,000			
	Lanyon Avenue & 112 th Street		1			\$5,000				

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
	Bryans Avenue & 112 th Street		1			\$5,000				
	Rita Avenue & 110 th Street	2							\$90,000	
	105 th Street & Moran Avenue		1				\$5,000			
Willowgrove	Stensrud Road & Muzyka Road		1				\$5,000			
	Stensrud Road & Van Impe Court / Lamarsh Road		1				\$5,00			
	Stensrud Road & Addison Road / Shepherd Crescent		2				\$10,000			
	Stensrud Road & Paton Crescent (south)		1				\$5,000			
	Willowgrove Boulevard & Maguire Crescent (east)	2							\$90,000	
	Muzyka Road & Patrick Crescent (south)			Raised Crosswalk		\$10,000				
Buena Vista	Eastlake Avenue & 2 nd 4 th & 6 th Street		6							\$30,000
	Melrose Avenue & 1 st 3 rd & 5 th Street		5				\$25,000			
	Melrose Avenue & 6 th Street	1								\$100,000
	Victoria Avenue & 6 th Street	1			\$90,000					
Dundonald Dundonald	Latrace Road & Wedge Road	1	1							\$50,000
	Latrace Road & Robinson Crescent (south)	2	2							\$100,000
	Latrace Road & Flavelle Crescent (north)	2	1							\$95,000

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
	George Road & Wedge Road		1				\$5,000			
Erindale – Arbor Creek	Bentham Crescent (south) & Kenderdine Road	2								\$90,000
	Wickenden Crescent & Rogers Road	1								\$45,000
	Rogers Court & Rogers Road		1					\$5,000		
	Forsyth Way & Cowley Road	1								\$45,000
	Steiger Crescent / Forsyth Crescent & Kenderdine Road		1				\$5,000			
	Stodolaa Court & Kenderdine Road		1				\$5,000			
	Kucey Crescent (west) & Kenderdine Road		1						\$5,000	
	Kucey Crescent (east) & Kenderdine Road		1						\$5,000	
	Beckett Green (north) & Kenderdine Road		1						\$5,000	
	Beckett Green (south) & Beckett Green	1								\$45,000
	Cowley Road & Kerr Road	2								\$90,000
	Kenderdine Road & Kerr Road (east)			Roundabout						\$150,000
North Park - Richmond Heights	Balmoral Street & 8 th Avenue	2								\$90,000
Queen Elizabeth - Exhibition	St. Henry Avenue & Hilliard Street		2							\$90,000
	Herman Avenue & Isabella Street		1			\$5,000				

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
	Eastlake Avenue & Maple Street	2								\$90,000
	Eastlake Avenue & Hilliard Street		2						\$10,000	
	Eastlake Avenue & Adelaide Street		1				\$5,000			
	St. George Avenue & Ruth Street			Channelized Island						\$90,000
Silverwood Heights	Adilman Drive & Neusch Crescent (west) / Egnatoff Crescent (west)		1						\$5,000	
	Goerzen Street & Nordstrum Road		1						\$5,000	
	Russell Road & Girgulis Crescent (north)	1			\$45,000					
	Molloy Street & Bain Crescent (West) / Kindrachuk Crescent (West)		1					\$5,000		
	Silverwood Road & Whiteswan Drive	2	1							\$105,000
	Silverwood Road & O'Brien Crescent (East) / A.E. Adams Crescent (West)		1					\$5,000		
	Whiteswan Drive & A.E. Adams Crescent Walkway (West)	2	1							\$95,000
	Whiteswan Drive & Wastewater Treatment Plant Access	2	1							\$95,000
Wildwood	Parkdale Road & Rosedale Road	1								\$45,000
	Rosedale Road & Tennant Crescent	1								\$45,000

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
	Rosedale Road & Schwager Crescent	1								\$45,000
College Park - East College Park	Carleton Drive & Acadia Drive	2								\$90,000
	Boychuk Drive & McMaster Crescent / Waterloo Crescent (West)	2								\$90,000
	Boychuk Drive & McMaster Crescent / Waterloo Crescent (East)	2	1							\$95,000
	Boychuk Drive & Laval Crescent (East)	2	1							\$95,000
	Boychuk Roundabout	1								\$50,000
	Balfour Street & Harrington Street		2							\$10,000
Eastview - Nutana Suburban Centre	Arlington Avenue & Louise Street		1							\$5,000
	Arlington Avenue & 1800 Easthill		2							\$10,000
	Arlington Avenue & 2300 Easthill		1							\$5,000
	Arlington Avenue & 1100 East Centre		1							\$5,000
	Arlington Avenue & 2700 Eastview		1							\$5,000
	Arlington Avenue & 3100 Eastview		1							\$5,000
Fairhaven	Pendygrasse Road in front of St. Mark School			Median Island Removal		\$10,000				

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
	Fairmont Drive & Forrester Road	1								\$45,000
	Clancy Drive & Fairmont Drive		2							\$10,000
	Forrester Road & Olmstead Road	2								\$90,000
Forest Grove	Berini Drive & Rogers Road	1								\$45,000
	Gray Avenue & Cruise Street		1							\$5,000
	Gray Avenue & James Street		1							\$5,000
	Rossmo Road & Bradwell Avenue		2							\$10,000
	Rossmo Road & Pitt Avenue		2							\$10,000
Massey Place	Milton Street & Northumberland Avenue		1							\$5,000
	Northumberland Avenue & Mackie Crescent (south)		1							\$5,000
	Massey Drive & Northumberland Avenue		1							\$5,000
	Northumberland Avenue Moore Place - McKay Place		1							\$5,000
River Heights	Churchill Drive & Ravine Drive / Ravine Court		4							\$20,000
	Ravine Drive & Churchill Court	3								\$135,000
	Assiniboine Drive & St. Lawrence Crescent	2	1							\$95,000

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
	Assiniboine Drive & Albany Crescent		1							\$5,000
	Pembina Avenue & Spadina Crescent		1		\$5,000					
	Assiniboine Drive & Nahanni Drive		2							\$10,000
Riversdale	Spadina Crescent & Avenue C	1								\$45,000
	Spadina Crescent & Avenue D	1								\$45,000
	Spadina Crescent & Avenue E	1								\$45,000
	Spadina Crescent & 17 th Street	3	4							\$200,000
	19 th Street & Avenue F		2							\$10,000
	Avenue H (20 th Street - 22 nd Street)	2								\$90,000
	21 st Street & Avenue F	2								\$90,000
Westview	Junor Avenue & Peterson Crescent / Ward Road		1							\$5,000
	Junor Avenue & Richardson Road		1							\$5,000
	Junor Avenue & Makaroff Road		1							\$5,000
	37 th Street & pathway east of Byers Crescent	1				\$45,000				
	Byers Crescent & Selkirk Crescent (south intersection)	3								\$135,000
	Richardson Road & Byers Crescent	2								\$90,000

Neighbourhood	Location	Curb Extensions	Median Islands	Other Devices	Project Budget Year (subject to available funding)					
					2020	2021	2022	2023	2024	Beyond 2024
	Avenue W & Byers Crescent	1								\$45,000
Total Cost for NTR Permanent Installations					\$620,000	\$895,000*	\$500,000	\$500,000	\$500,000	\$3,742,000

* \$125,000 of the funds will come from carry-over from the 2019 budget since the contract came in below budget.

Overnight Parking Restrictions in Business Improvement Districts

ISSUE

Overnight parking restrictions posted in Riversdale, Downtown and 33rd Street Business Improvement Districts have not been applicable, or enforced for street sweeping and snow clearing for a number of years.

BACKGROUND

City Council at its Regular Business Meeting held on August 13, 2018, considered the Update to Bylaw No. 8463, The Sidewalk Clearing Bylaw, 2005 which revised the requirement for owners or occupants to clear the sidewalk in front of their properties within 24 hours of a snowfall, and resolved, in part:

- “3. That the Administration report back to the Standing Policy Committee on Transportation on the potential of parking enforcement in the Business Improvement Districts”

Parking restrictions are currently in place for certain streets within the Riversdale, Downtown, and 33rd Street Business Improvement Districts (BIDs). These restrictions prohibit vehicles from parking between 2:00 a.m. and 6:00 a.m. three nights per week. Parking restrictions are for different nights on the streets than the avenues in the Riversdale and Downtown BIDs.

The restrictions were put in place a number of years ago in order to carry out road maintenance such as street sweeping and snow clearing during the restricted time. Some of the parking restriction signage is currently in poor condition due to its age.

CURRENT STATUS

The parking restrictions have not been used for road maintenance, or enforced by ticketing or towing for a number of years.

Street sweeping and snow removal are no longer scheduled only on the specific nights or times when the restrictions are in place. Street sweeping and snow clearing is undertaken as soon as resources allow rather than waiting until the parking restrictions are in place. To increase efficiency, the crews do street sweeping and snow removal on the streets and avenues on the same night, rather than on different nights.

Street sweeping and snow removal are completed at night when there is only a few parked vehicles. Crews work around the parked vehicles. Any areas not accessible due to parked vehicles are completed during the next monthly sweep or the next time it snows.

Concerns have been raised regarding the inconvenience the restrictions cause as they are in place several times a week, while street sweeping only occurs once a month and

snow clearing following a snowfall.

DISCUSSION/ANALYSIS

The main advantage of scheduling snow clearing and street sweeping only during the periods of parking restrictions and enforcing the parking restrictions is there would be no parked cars preventing a full curb-to-curb street sweep or snow clearing.

Disadvantages of scheduling snow clearing and street sweeping only during the periods of the parking restriction would:

- delay completion of the work
- require additional funding; and
- cause parking inconvenience for residents.

Delays to the completion of the work would occur as crews may be ready to undertake the work, but the parking restrictions are not in place until the next day or later in the week.

Additional funding would be required for multiple crew visits, and for ticketing and towing services for vehicles that did not follow the parking restrictions. Multiple crew visits would be needed to complete the work as the parking restrictions on the avenues and the streets are on different nights.

Parking inconvenience for residents and customers in the BIDs is expected to increase as vehicles would be towed due to enforcement of the parking restrictions. After a number of years of not enforcing parking restrictions at these locations, people are complacent and ignore the signs. Significant communication efforts would be required to increase public awareness if enforcement were to begin.

Scheduling snow clearing and street sweeping only during the periods of parking restriction cannot be undertaken without a change to the level of service for both street sweeping and snow clearing. This change would include delaying provision of services to deliver a curb-to-curb sweep or snow clearing at a higher cost.

Consultations

Removal of the parking restrictions was discussed with the Riversdale, Downtown, and 33rd Street BIDs with the following responses being provided:

- Downtown BID would like to see the parking restrictions removed as they have not been used and some of the signs are in poor condition.
- 33rd Street BID noted that the signs can be confusing for residents and did not have concerns with their removal since they are not being used.
- Riversdale BID would like the parking restrictions to remain. They would like to see snow clearing and street sweeping performed only during the restricted time so maintenance is completed curb to curb

Consultation with the general public did not take place.

IMPLICATIONS

The estimated cost to remove the signs for the parking restrictions is approximately \$10,000. Existing budgets will cover the cost and no incremental funding is required.

There are no legal, social or environmental implications identified.

NEXT STEPS

Removal of the overnight parking restriction signage in the three BIDs will be completed in the winter of 2019/2020.

If the number of vehicles parked overnight in the Riversdale BID increases and is creating more problems for undertaking snow clearing and street sweeping, other ways of addressing the parked vehicles and how the work is being completed will be considered.

An increased level of service for street sweeping will be considered as part of the 2020/2021 Business Plan and Budget options to address concerns with missed locations due to parked vehicles. The increased level of service includes the addition of a small sweeper to maintain any spots not completed due to parked vehicles. Overnight parking restrictions would not be used with this increased level of service.

APPENDICES

1. Photo - Overnight Parking Restrictions in Business Improvement Districts

Report Approval

Written by: Tracy Danielson, Roadways Manager

Reviewed by: Jo-Anne Richter, Director of Community Standards
Goran Saric, Director of Roadways Fleet & Support
Jay Magus, Director of Transportation

Approved by: Lynne Lacroix, General Manager, Community Services Department
Terry Schmidt, General Manager, Transportation & Construction Department

Admin Report - Overnight Parking Restrictions in BIDs.docx

Overnight Parking Restrictions in Business Improvement Districts



From: Brent Penner <brent.penner@dtntyxe.ca>
Sent: Sunday, November 03, 2019 9:15 PM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Sunday, November 3, 2019 - 21:14

Submitted by anonymous user: 96.125.245.227

Submitted values are:

Date Sunday, November 03, 2019
To His Worship the Mayor and Members of City Council
First Name Brent
Last Name Penner
Email brent.penner@dtntyxe.ca
Address 242 3rd Avenue South
City Saskatoon
Province Saskatchewan
Postal Code S7K 1L9
Name of the organization or agency you are representing (if applicable) Downtown Saskatoon
Subject Snow Clearing in Bike Lanes (7.1.4) & Parking Sign Removal (7.1.9)
Meeting (if known) SPC on Transportation
Comments
Good evening,

I would like to briefly speak to items 7.1.4 and 7.1.9 at the Committee meeting tomorrow.

Thank you,

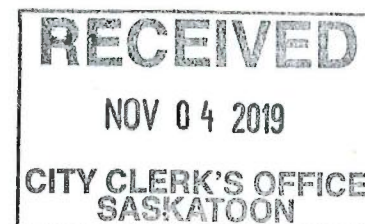
Brent Penner
Executive Director
Downtown Saskatoon
Attachments

The results of this submission may be viewed at:

<https://www.saskatoon.ca/node/398/submission/347554>

From: Randy <randy@riversdale.ca>
Sent: Monday, November 04, 2019 7:59 AM
To: Web E-mail - City Clerks
Cc: 'Randy'; 'Riversdale Communications'
Subject: STANDING POLICY COMMITTEE ON TRANSPORTATION NOVEMBER 4, 2019
Attachments: IMG_8289.JPG; IMG_0940.JPG; image3.jpeg

STANDING POLICY COMMITTEE ON TRANSPORTATION
MONDAY, NOVEMBER 4, 2019 AT 2:00 PM
7.1.9 OVERNIGHT PARKING RESTRICTIONS IN BUSINESS IMPROVEMENT DISTRICTS
(FILES CK 6120-1, X1680-1)



GOOD MORNING COUNCILLORS:

PLEASE ACCEPT MY REGRETS FOR NOT BEING ABLE TO PRESENT IN PERSON, HOWEVER THE RBID WOULD WELCOME A RESPONSE TO THE QUESTIONS BELOW AT THE NEXT COUNCIL MEETING IN NOVEMBER TO SHARE WITH THE WIDER COMMUNITY SOME UNANSWERED QUESTIONS ARISING FROM THE REPORT.

ISSUE

Overnight parking restrictions posted in Riversdale, Downtown and 33rd Street Business Improvement Districts have not been applicable, or enforced for street sweeping and snow clearing for a number of years.

THE QUESTION REMAINS UNANSWERED: PARKING ENFORCEMENT IS ENFORCING METERED PARKING, PARKING IN FRONT OF A FIRE HYDRANT, TOO CLOSE TO CURBS AND MANY OTHERS. COULD WE PLEASE HAVE A RESPONSE AS TO WHY THIS PARTICULAR HAVE NOT BEEN ENFORCED FOR YEARS.

Some of the parking restriction signage is currently in poor condition due to its age.

GIVEN THE RECOMMENDATION THAT \$10,000 CAN BE FOUND WITHIN EXISTING BUDGETS TO REMOVE THE SIGNS; WE HAVE IDENTIFIED AND REQUESTED FADED AND DAMAGED SIGNS BE REPLACED WITH OUR ANNUAL MAINTENANCE WALK WITH URBAN DESIGN; THE SIGNS HAVE NOT BEEN REPLACED OR CHANGED. COULD WE PLEASE HAVE A RESPONSE WHY FUNDS ARE AVAILABLE TO REMOVE SIGNS AND NOT REPLACE SIGNS WHEN THE REPORT CONFIRMS THE SIGNAGE IS CURRENTLY IN POOR CONDITION.

CURRENT STATUS

The parking restrictions have not been used for road maintenance, or enforced by ticketing or towing for a number of years.

WHY IS THIS NOT BEING ENFORCED LIKE OTHER PARKING INFRACTIONS ARE?

Street sweeping and snow removal are no longer scheduled only on the specific nights or times when the restrictions are in place. Street sweeping and snow clearing is undertaken as soon as resources allow rather than waiting until the parking restrictions are in place.

BUSINESS OWNERS AND RBID STREET AMBASSADORS RELY ON PREDICTABLE SCHEDULES AND WILL WASH AND SWEEP DEBRIS FROM SIDEWALKS INTO THE STREET IN ADVANCE OF SCHEDULED CLEANING. SHORT NOTICE BY THE CITY ADVISING THAT SWEEPING OR SNOW REMOVAL WILL OCCUR TONIGHT OR TOMORROW NIGHT IS HIGHLY DISRUPTIVE TO THE SCHEDULING IN ORDER TO COMPLY AND BE LEFT WITH A CLEAN PUBLIC SPACE.

SCHEDULING STAFF TO TEND TO PUBLIC AREAS IN ADVANCE OF POSTED TIMES IS CURRENTLY WORKING. POSTING ON FACEBOOK OR SENDING EMAILS THAT CREWS ARE COMING TOMORROW NIGHT IS NOT ENOUGH NOTICE.

To increase efficiency, the crews do street sweeping and snow removal on the streets and avenues on the same night, rather than on different nights.

THE REASON THE STREETS AND AVENUES HAVE ALTERNATING DAYS IS THAT BUSINESS CUSTOMERS AND RESIDENTS HAVE THE CONVENIENCE OF LEAVING VEHICLES PARKED OVERNIGHT ON ONE STREET OR ONE AVENUE TO ALLOW EFFICIENCY WITH ROADWORK AND NOT HAVE MISSED AREAS TO GO AROUND PARKED CARS. THIS IS A REASONABLE SOLUTION FOR BOTH THE CITY CREWS AND BUSINESS AND RESIDENTS TO HAVE OPTIONS AND AVOID PARKING INFRACTIONS.

Street sweeping and snow removal are completed at night when there is only a few parked vehicles. Crews work around the parked vehicles.

COULD WE HAVE A RESPONSE AS TO HOW WE ADDRESS THE FILTHY STREET CONDITIONS THAT EXIST BY PASSING PARKED CARS WHEN THE DEBRIS WE NEED REMOVED IS UNDER THE PARKED CARS AND AGAINST THE CURBSIDE. OUR NIGHTTIME ECONOMY IS EXPECTED TO GROW AND ATTRACT MORE PEOPLE DRIVING TO OUR DESTINATION BASED BUSINESSES.

SEPTEMBER 4, 2019 AT 9:04PM STREET SWEEPERS WERE GOING PAST BLOCKS OF CARS DUE TO SEVERAL EVENTS LAUNCHING OR UNDERWAY THAT EVENING. (300 BLOCK AVENUE B SOUTH AT THE TIME).

THIS IS CLEARLY A FAILURE TO DELIVER TO THE DISTRICT THE RESULT OF WHAT IS BADLY NEEDED: CLEAN STREETS.

Any areas not accessible due to parked vehicles are completed during the next monthly sweep or the next time it snows.

WE HAVE BEEN ADVISED THE COST IS THE FACTOR FOR DELIVERING THE 'ONCE PER WEEK SWEEP' WE ORIGINALLY WERE RECEIVING. GIVEN THIS REASONING FOR DECREASING THE LEVEL OF SERVICE WE NEED IN OUR DISTRICT, COULD WE SEE THE CALCULATIONS OF HOW SAVINGS ARE REALIZED BY SENDING CREWS TO RETURN TO THE SAME AREA TO CLEAN WHERE THERE WERE PARKED CARS, TO STILL HAVE PARKED CARS IN THEIR WAY WHEN RETURNING. THE CITY NEEDS EFFICIENCY BY CLEANING STREETS AND AVENUES THE SAME NIGHT, BUT WILL RETURN TO THE DISTRICT WITH NO GUARANTEE THE AREAS WILL BE CLEAR OF PARKED CARS.

Concerns have been raised regarding the inconvenience the restrictions cause as they are in place several times a week, while street sweeping only occurs once a month and snow clearing following a snowfall.

THE RBID WOULD SUBMIT THAT AS MORE BUSINESSES ARE LOOKING TO ESTABLISH IN THE AREA, THE UPTAKE OF PROVIDING A CLEAN AREA FOR CUSTOMERS BY CLEANING SIDEWALKS AND CURBSIDES IN A COORDINATED MANNER IS INCREASING. MANY HAVE LIMITED STAFF YET STILL WANT THE IMMEDIATE AREAS NEAR BUSINESS CLEAR OF DEBRIS AND SNOW TO AVOID CUSTOMERS GETTING STUCK.

THE MOST COMMON CALL TO OUR OFFICE IS THAT SNOW REMOVAL OR SIDEWALK CLEANING DID NOT OCCUR ON THE DAYS THAT IT WAS SCHEDULED OR RECENTLY, WHEN SENT OUT BY THE CITY FOR A PARTICULAR NIGHT AND NOT HAVING THE JOB DONE. MANY CONCERNS ARE VOICED TO THE RBID ABOUT THE LACK OF PROPER REMOVAL, AND FAILURE TO RETURN TO CATCH THE MISSED PORTIONS. WAITING ONE MORE MONTH MEANS LEAVING THE DISTRICT FILTHY FOR THAT MUCH LONGER.

THE RBID OFFICE HAS CONSISTENTLY RECEIVED CALLS FROM BUSINESSES WHEN TEMPORARY NO PARKING SIGNS ARE PREVENTING CUSTOMERS FROM PARKING DURING REGULAR BUSINESS HOURS IN FRONT OF THEIR BUSINESSES.

CITY COUNCIL MUST BEAR THE FOLLOWING IN MIND REGARDING THE RIVERSDALE BID AREAS WHEN SNOW CLEARING:

- 20TH STREET WEST IS ON A BUS ROUTE, HIGHLY UTILIZED BY FIRE TRUCKS FROM NO.1 FIRE HALL, AND A MAJOR ROUTE TO ST. PAUL'S HOSPITAL FOR THE AMBULANCE.
- WHERE MOST MAJOR ARTERIAL ROADWAYS ARE 90 FEET WIDE, 20TH STREET WEST IS ONLY 66 FEET WIDE AND NEEDS QUICK AND EFFICIENT WINDROWING AND LOADOUT OF SNOW.

- MANY BUSINESSES ALREADY AVOID PLACING MORE SNOW INTO THE PARKING LANE UNTIL CREWS REMOVE EXISTING SNOW, THEN SHOVEL SIDEWALKS INTO THE PARKING LANE TO AVOID PEOPLE GETTING STUCK.
- THE NORTH SIDE OF 20TH STREET WEST TYPICALLY HAS SNOW SETTLING DUE TO SHELTERED AREAS FROM PREVAILING NORTHWEST WINDS
- AVENUES A-D ARE THE PRIMARY COMMERCIAL AREAS WITH ROADS SOUTH OF 20TH THAT ARE STREETSCAPED AND NEED ATTENTION TO ALLOW FOR EASE OF PARKING AND CYCLING IN THE AREA.
- THE DESIRE AND WILL OF THE MAJORITY OF BUSINESSES TO CLEAN THE AREA IS STRONG, AND A PREDICTABLE SCHEDULE THAT IS ADHERED TO HAS DEMONSTRATED IN THE PAST TO WORK WELL.
- AS PART OF THE WINTER CITY STRATEGY, WE HAVE REPEATEDLY HEARD THAT THE ABILITY TO MOVE ABOUT WHETHER ABLE-BODIED AND ON FOOT, OR IN A SCOOTER OR WHEELCHAIR IS PARAMOUNT TO SUCCESS HERE.
- TEMPORARY NO PARKING SIGNS COST MONEY TO PUT OUT IN ADVANCE OF CREWS WORKING, AND BEING PICKED UP FOLLOWING CREWS COMPLETING THEIR WORK.

CITY COUNCIL MUST BEAR THE FOLLOWING IN MIND REGARDING THE RIVERSDALE BID AREAS WHEN STREET SWEEPING:

- THE RIVERSDALE BID WAS RECEIVING ONE SWEEP PER WEEK BEGINING TUESDAYS FROM 2AM TO 6AM. THIS ALLOWED MERCHANTS AND STAKEHOLDERS TO CLEAN THEIR PROPERTIES ON MONDAYS. IT WORKED WELL.
- CREWS HAD EXPRESSED FRUSTRATION NOT BEING ABLE TO COMPLETE THE MUCH NEEDED CURB TO CURB SWEEPING DUE TO PARKED CARS OVERNIGHT. IN 1992 THE RBID HAD ESTABLISHED THE REASONABLE IMPLEMENTATION OF RESTRICTIONS OVERNIGHT TO ALLOW CREWS TO PERFORM THEIR WORK PROPERLY AND THOROUGHLY.
- WE UNDERSTAND THE TEMPORARY OVERNIGHT PARKING RESTRICTIONS WERE IN PLACE WITH THE 1993 STREETSCAPING FROM AVENUE A TO AVENUE D, WITH RESTRICTIONS TO AVENUE H.
- AREAS MISSED BY NOT OBSERVING PARKING RESTRICTIONS ARE THEREFORE LEFT FOR YET ANOTHER MONTH AND THE DISTRICT REMAINS FILTHY FOR TWO MONTHS.
- IF A VEHICLE IS PARKED IN THE SAME SPOT NEXT MONTH, THE CREWS GO AROUND AND THE AREA IS FILTHY FOR THREE MONTHS.
- STREET SWEEPING WAS FROM AVENUE A TO AVENUE P ON 20TH STREET WEST, AND AVENUES A TO D FROM 22ND STREET WEST TO THE RIVER.
- ALTERNATING BETWEEN STREETS AND AVENUES ALLOWED THOSE LIVING ON 20TH STREET WEST OR ON THE AVENUES, A PLACE TO PARK WHILE ALLOWING CREWS TO CLEAN THIS DISTRICT PROPERLY.
- RAIN OR EQUIPMENT FAILURE MEANT THE CREWS COULD RETURN LATER THAT SAME WEEK AND COMPLETE THEIR WORK, UNINTERRUPTED, WITH BETTER WEATHER OR SERVICED EQUIPMENT
- THE RBID HAS SEVERAL AREAS WITH CHALLENGES IN MAINTENANCE ON A REGULAR BASIS THAT NEEDS MORE ATTENTION THAN CURRENTLY UNDERWAY. IT WAS BETTER BEFORE.
- THERE IS FAR MORE DEBRIS IN APRIL THAN IN JULY AND WITH MORE FREQUENT SWEEPS, CREWS CAN PERFORM WORK QUICKER AND HAVE LESS ROAD DEBRIS TO REMOVE AS THE SEASON MOVES ON.
- THE FALL SWEEP FOR LEAVES IS CRUCIAL FOR THE RELATIVELY FLAT DISTRICT WE HAVE, AND SINCE CREWS AND THE RBID STREET AMBASSADOR FOCUS ON CLEARING STORM CATCH BASINS, STORE FRONT FLOODING IS ALMOST NON-EXISTENT.
- WITH THE AREA FACING MORE CHALLENGES TO THE WEST OF 20TH STREET THE NEED TO ENSURE THAT WHILE THE DISTRICT IS MARGINALIZED, IT NEEDS MORE ATTENTION FROM THE CITY THAN CURRENTLY UNDERWAY.
- THE CITY CENTRE PLAN AND CALLS FOR MORE ANIMATION IN OUR CENTRE CITY BID AREAS MEANS MORE PEOPLE, MORE DEBRIS, AND MORE FREQUENCY. IT'S HARD TO ENJOY AN OUTDOOR PATIO WITH FILTH AROUND YOU.

THE RBID BOARD HAS DISCUSSED THE TOPIC MANY TIMES OVER MANY YEARS WITH THE RESULT BEING THE NEED FOR CLEAN STREETS, WHETHER SNOW IN WINTER OR DEBRIS IN SUMMER THE PRIORITY FOR THE DISTRICT. THE EXISTING PROTOCOLS IN PLACE WERE WORKING WELL. THE WEEKLY STREET SWEEP NEEDS TO BE REINSTATED TO ENSURE WE ARE PRESENTING OURSELVES THE BEST WAY POSSIBLE.

THE RBID WILL PROVIDE A MOTION FOR CITY COUNCIL'S NOVEMBER 2019 MEETING REGARDING OVERNIGHT PARKING RESTRICTIONS IN THE RBID.

ATTACHED PHOTOS SHOW THE COSTLY TEMPORARY NO PARKING SIGNS DURING REGULAR BUSINESS HOURS; THE ABSENCE OF CARS AT 4:15AM; FADED NO PARKING SIGN.

THANK YOU,
RANDY PSHEBYLO

Randy Pshebylo; BDM, Executive Director

RIVERSDALE BUSINESS IMPROVEMENT DISTRICT

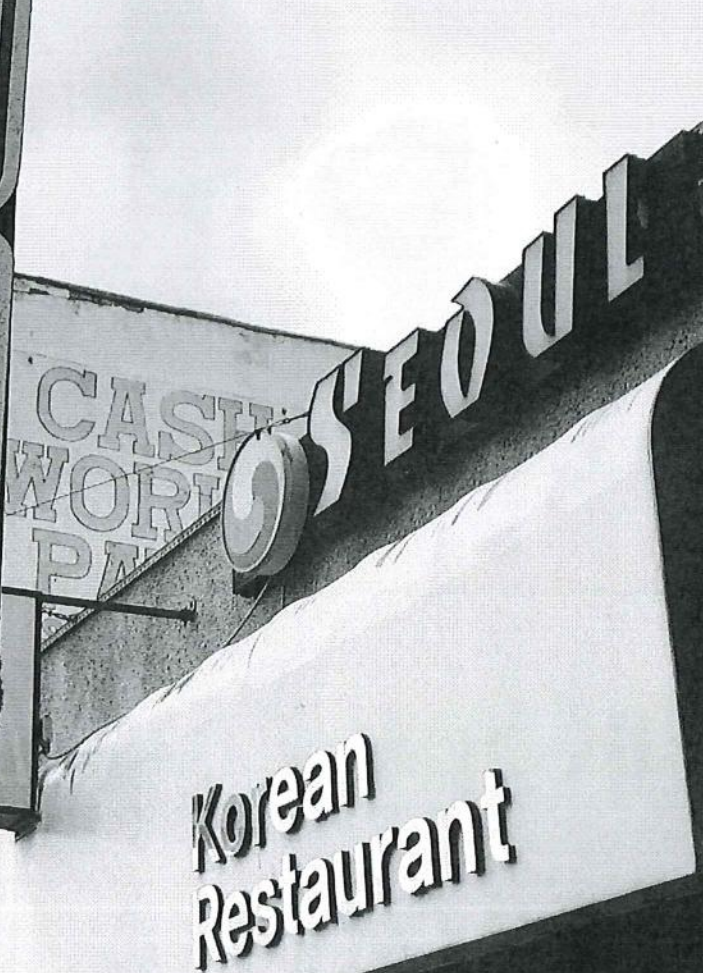
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Bicycle Bylaw Update - Proposed Revisions

ISSUE

The last revision to City of Saskatoon Bylaw No. 6884, The Bicycle Bylaw was completed in December 2011. In consideration of the Active Transportation Plan, and the evolution of transportation policies, revisions are recommended.

RECOMMENDATION

That the Standing Policy Committee on Transportation recommend to City Council:

1. That Bylaw No. 6884, The Bicycle Bylaw be amended as based on the policy framework provided in this report; and
2. That the City Solicitor be requested to prepare the appropriate amendment to Bylaw No. 6884, The Bicycle Bylaw.

BACKGROUND

The Active Transportation Plan, approved in principle by City Council on June 27, 2016, contains an 80-point action plan that outlines improvements to new and existing infrastructure, programming, policies, and standards. Action item 6B.1, under the Education and Awareness theme, specifies the need to “review and update Bicycle Bylaw No. 6884 to ensure that it reflects best practice.”

City Council, at its 2018 Preliminary Business Plan and Budget meeting held on November 27, and 28, 2017, considered and approved the Transportation 2018 Business Plan and Budget. Included in Capital Project #2468 – Active Transportation Implementation Plan was the Bicycle Bylaw Update project.

DISCUSSION/ANALYSIS

The Administration has developed new bylaw content for consideration. The potential bylaw revisions describe the intention of proposed rules rather than the specific text that will form the finalized bylaw. Most revisions are adapted from regulations enacted in other jurisdictions. The technical documentation, including multi-jurisdictional scans, can be found in Appendix 1.

Item	Section	Modifications
1	Operation	<ul style="list-style-type: none">• Removed requirement for people cycling to ride as close to curb as practicable• Added hand signaling requirement• Clarified the number of passengers allowed• Clarified allowable loads
2	Bicycle Equipment	<ul style="list-style-type: none">• Added that a red rear reflector may be used instead of a light
3	Sidewalks	<ul style="list-style-type: none">• Added allowance for children under 14
4	Shared Use Pathways	<ul style="list-style-type: none">• Clarified Shared Use designation• Applied rules for park trails to all shared-use facilities

Bicycle Bylaw Update - Proposed Revisions

Item	Section - Continued	Modifications - Continued
5	Bridges	<ul style="list-style-type: none">Removed requirement for people cycling to dismount on sidewalks
6	Cycle Tracks	<ul style="list-style-type: none">Added requirement for people cycling to ride in the direction of trafficRemoved requirement for people riding bicycles to use only exclusive bicycle lanes
7	Motorist Overtaking a Person Riding a Bicycle	<ul style="list-style-type: none">Added one-meter passing rule for two-way, single-lane streets
8	Freeways	<ul style="list-style-type: none">Updated Schedule A: Freeway System
9	Penalties	<ul style="list-style-type: none">New restrictions are being added so there will be new penalties
10	Electric or Power Assisted Bicycles	<ul style="list-style-type: none">Regulated federally and provincially
11	Helmets	<ul style="list-style-type: none">The City will continue to recommend helmet use by all cyclists and passengers and encourage provincial legislation for cyclists under 18 years of age

Engagement

In the spring of 2018, the Administration invited the following 13 stakeholder organizations and 2 City of Saskatoon Advisory Committees to comment on the current bylaw and to submit considerations for a revised bylaw:

- Biketrix
- Canadian Paediatric Society
- City of Saskatoon Traffic Safety Committee
- Greater Saskatoon Catholic School Division
- Meewasin
- Saskatchewan Cycling Association
- Saskatchewan Government Insurance
- City of Saskatoon Accessibility Advisory Committee
- Saskatchewan Healthy Authority
- Saskatchewan Prevention Institute
- Saskatoon and District Safety Council
- Saskatoon Council on Aging
- Saskatoon Cycles
- Saskatoon Public School Division
- Walking Saskatoon

The engagement consisted of an initial meeting with each group to explain the goals and objectives, as well as detailed explanations on the application and limitations of bylaws.

The engagement concluded with a roundtable meeting on September 26, 2019 with all stakeholders in addition to the Active Transportation Advisory Group. The Administration presented content of the proposed bicycle bylaw changes and each item being discussed by the stakeholders. Reservations were raised about sidewalk riding related to narrow infrastructure, courtesy, and increasing cyclist volumes: however, the proposed revision was supported.

At the roundtable meeting, helmet use was also discussed. Written support for the mandatory use of helmets was received from the Canadian Paediatric Society, Saskatchewan Prevention Institute, and the Saskatoon and District Safety Council. Written support for the continued encouraging use of helmets, but not mandatory use, was received from the Saskatchewan Healthy Authority. Verbal support for continuing to

encourage the use of helmets, but not mandatory use, was also received from the Greater Saskatoon Catholic School Board and the Saskatoon Public School Board. The primary reason expressed for encouraging the use of helmets, but not making them mandatory, was to not increase economic barriers to cycling.

Education and Awareness

A communications plan will be ready for implementation following adoption of any updates to Bylaw No. 6884, The Bicycle Bylaw. One key element will be revisions to the BYXE campaign, launched in the spring 2019 to educate residents about all changes. A news conference and additional advertising outside of the campaign may also be required.

Personal Transportation Devices (e-scooters)

The Administration has confirmed with the Province of Saskatchewan that an e-scooter is considered a non-compliant motor vehicle and is therefore currently prohibited from travelling in the public right-of-way. The Administration has struck an internal working group consisting of staff from Transportation, Solicitors, and Bylaw Enforcement to review and track how other jurisdictions are accommodating, or not, e-scooters. Accordingly, at this time e-scooters are not included in the Bicycle Bylaw proposed revisions.

IMPLICATIONS

Legal implications that deal with the enforceability of the new requirements under the bylaw are yet to be determined. Social implications, outside of safety, were not reviewed. There are no financial implications to the City of Saskatoon, however, there may be financial implications to cyclists. Environmental benefits gained by increasing active transportation have not been quantified.

NEXT STEPS

Upon City Council approval, the Administration will work with City Solicitors to prepare a revised bicycle bylaw.

APPENDICES

1. Proposed Bicycle Bylaw Project Report

Report Approval

Written by:	Marina Melchiorre, Senior Transportation Engineer
Reviewed by:	David LeBoutillier, Engineering Manager, Transportation Jay Magus, Director of Transportation
Approved by:	Terry Schmidt, General Manager, Transportation & Construction Department

Proposed Bicycle Bylaw

Project Report

**October 2019
City of Saskatoon**

AUTHORIZATION

Prepared By:



**Marina Melchiorre, P.Eng., PTOE
Senior Transportation Engineer**

Cover Photo credit: Copenhagenize Design Co. Canada

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INTRODUCTION

The purpose of this attachment is to document the Administration's recommended rule change to compose a new bicycle bylaw to replace Bicycle Bylaw, No. 6884. The proposed bicycle bylaw describes the intention of a proposed rule rather than the specific text that will form the finalized bylaw. Most modifications are adapted from regulation enacted in other jurisdictions.

The purpose of this report is to document the content of a new bicycle bylaw recommended by the Administration. The report sets out proposed rules and regulations, many of which are adapted from bylaws in force in other jurisdictions, rather than the specific text that will form the finalized bylaw.

The Proposed New Bicycle Bylaw will:

- Complement the City's vision for pedestrian and bicycle mobility.
- Be easy to understand and feasible to implement.
- Provide an effective enforcement tool to complement the Traffic Bylaw, No. 7200 and provincial Traffic Safety Act.

SECTIONS

PROPOSED BYLAW

This section presents the content of the proposed new bylaw.

SIDE-BY-SIDE COMPARISON: NEW & CURRENT

This section presents the content of the proposed new bylaw alongside current Bicycle Bylaw, No. 6884.

EXPLANATION OF CHANGES

This section lists each component of the proposed bylaw and discusses the rationale for the change as well as practices from across Canada.

STAKEHOLDER ENGAGEMENT

The project engaged 15 stakeholder organizations who submitted their considerations for a new bylaw. This section summarizes their recommendations.

CONTENTS OF PROPOSED BYLAW

The following sets out proposed rules and regulations, many of which are adapted from bylaws in force in other jurisdictions, rather than the specific text that will form the finalized bylaw.

DEFINITIONS

The proposed bylaw will contain definitions to clarify the intended meaning of terms. These definitions may include some or all of the following:

“Act” means The Traffic Safety Act of the Province of Saskatchewan.

“Bridge” means a structure carrying a road, path, railroad, or canal across a river, ravine, road, railroad, or other obstacle. Interchange bridges are included in this definition.

“Bicycle” means any muscular propelled, chain-driven wheeled device in, on, or by which a person is or may be transported or drawn.

“Cycle Track” means any road, street, path or way, physically separated from motorized vehicular traffic by an open space or barrier and either within the street right-of-way or within an independent right-of-way, which in some manner is specifically designated for bicycle travel. Includes exclusive bicycle lanes.

“Electric Bicycle” or “Power Assisted Bicycle” means a bicycle that combines muscular propulsion with electric motor assistance under the Motor Vehicle Safety Regulations (Canada) (C.R.C., c. 1038).

“Exclusive Bicycle Lane” is where a street has been divided into marked lanes for traffic and one or more lanes has been designated for use by bicycles by means of a traffic control device, the lane so designated and indicated is reserved for the exclusive use of bicycles and other permitted vehicles. An exclusive bicycle lane may be physically separated from motorized vehicular traffic by an open space or barrier.

“Motor Vehicle” means a vehicle propelled or driven by any means other than by muscular power, according to Part I.2(1)(r) of the provincial Traffic Safety Act.

“Multi-Use Path” means a trail or other path, physically separated from motorized vehicular traffic by an open space or barrier, either within the street right-of-way or within an independent right-of-way, and usable for transportation purposes.

“Park” means any improved or unimproved lands owned by or subject to the direction and control of The City of Saskatoon and intended for the recreational use and enjoyment of the general public, and, without limitation, includes all those areas encompassed by what is commonly known as the Meewasin Valley Trail, and all lands and environs associated therewith.

“Overtaking” means the act of one vehicle going past another slower moving or stopped vehicle, travelling in the same direction.

“Pedestrian” means a person on foot or in a wheelchair.

“River Crossing” means a bridge crossing the South Saskatchewan River.

“Shared-Use Path” means multi-use path or sidewalk delineated by signage or pavement markings where people cycling share the facility with pedestrians.

“Sidewalk” means a separated facility at the side of a street or roadway intended for use by pedestrians.

“Street” means all or any part of a road allowance, highway, road, lane, bridge, place, alley, square, thoroughfare, or way intended for or used by the general public for the passage of vehicles or pedestrians.

“Traffic Bylaw” means Bylaw No. 7200 of The City of Saskatoon and all amendments thereto;

“Vehicle” means a device in, on or by which a person or thing is or may be transported or drawn on a highway and includes special mobile machines and farm implements but does not include vehicles running only on rails or solely on railway company property, according to Part I.2(1)(ccc) of the provincial Traffic Safety Act.

1. OPERATION

A person riding a bicycle:

- 1) has the same rights and duties as a driver of a motor vehicle and is subject to the rules and regulations of the provincial Traffic Safety Act
- 2) shall not ride without due care and attention
- 3) shall not ride on a sidewalk unless permitted by signs or markings
- 4) shall utilize only that portion of the street as is intended for the passage of motor vehicles, except that cyclists may ride in a parking lane
- 5) shall keep at least one hand on the handlebars at all times
- 6) shall not ride other than upon or astride a regular seat of the bicycle
- 7) shall not use it to carry more persons at one time than the number for which it is designed and equipped
- 8) shall not carry any package, bundle, or article which prevents them from keeping both hands on the handlebars or obstructs their view
- 9) shall not ride on the left side of any two other bicycles being operated abreast on a street, except to overtake
- 10) shall not ride where signs and markings prohibit its use
- 11) shall not perform or engage in any stunt or other activity that is likely to distract, startle or interfere with other transportation network users
- 12) must give a signal by hand and arm prior to turning in the following manner:
 - a) when making a left-hand turn, by extending the left arm horizontally.
 - b) when making a right-hand turn, by extending the left arm bent vertically upwards.

2 BICYCLE EQUIPMENT

A person shall not ride a bicycle during the period from one-half hour before sunset to one-half hour after sunrise, or at any other time when conditions of poor visibility exist, unless the bicycle has the following:

- 1) at least one headlamp
- 2) at least one red rear light or red reflector

A person shall not ride a bicycle unless the bicycle has a functioning braking system adequate to control the movement of and to stop the bicycle whenever necessary.

A person shall not ride a bicycle unless the bicycle is equipped with a horn or bell capable of emitting sound audible under normal conditions for a distance of not less than thirty-five (35) metres.

3 SIDEWALKS

No person, over the age of 14, shall drive a bicycle upon a sidewalk unless:

- 1) the sidewalk is delineated as a Shared-Use Path by signage or pavement markings and they are operating at a moderate rate of speed, or so not to startle, endanger, or interfere with any other person, or
- 2) they are entering upon or leaving land adjacent to a street.

4 SHARED-USE PATHS

On any river crossing, bridge, multi-use path, park trail, or sidewalk designated as a Shared-Use Path, every person operating a bicycle shall:

- 1) comply with traffic signals, signs and markings
- 2) proceed with due care and attention and with reasonable consideration for all pedestrians and path users
- 3) yield the right of way to all pedestrians, at all times
- 4) operate the bicycle to the right of the center of any such sidewalk, trail, or path, except when overtaking and passing a pedestrian or a bicyclist in the same direction
- 5) alert anyone about to be overtaken by sounding a horn or a bell a reasonable amount of time before overtaking
- 6) operate at a moderate rate of speed, or so not to startle, endanger, or interfere with any other person.

5 BRIDGES

In traversing any bridge or river crossing, a person operating a bicycle may:

- 1) use that portion of the bridge or river crossing as is intended for the passage of motor vehicles; or,
- 2) use the sidewalk portion of any bridge or river crossing as a Shared-Use Path.

6 CYCLE TRACKS

A person riding a bicycle in a cycle track shall travel only in the direction designated for that lane.

Vehicles other than bicycles may not drive, stand, stop or park in an exclusive bicycle lane or cycle track except:

- 1) where the bicycle lane marking is dashed, motor vehicles may, when safe to do so, merge into the bicycle lane to make a turn.
- 2) where the bicycle lane is located between the travel lane and the parking lane, motor vehicles may, when safe to do so, cross the bicycle lane for parking the vehicle.

7 MOTORIST OVERTAKING A PERSON RIDING A BICYCLE

Every person in charge of a motor vehicle who is overtaking a person travelling on a bicycle on a street with one traffic lane in the direction of travel, shall, as nearly as may be practicable, leave a distance of not less than one meter between the bicycle and the motor vehicle and shall maintain that distance until safely past the bicycle. The one-meter distance required refers to the distance between the extreme right side of the motor vehicle and the extreme left side of the bicycle, including all projections and attachments.

8 FREEWAYS

No person shall operate a bicycle upon any of those streets set forth in Schedule “A”, except upon that portion of any such street as is clearly set aside and designated for the passage of bicycles.

9 PENALTIES

The penalty for breach of any of the provisions of this Bylaw shall be as set forth in Schedule “B” hereto.

Every person who breaches any of the provisions of this Bylaw is guilty of an offense and liable on summary conviction to a fine of (\$50.00) Dollars, hereinafter referred to as the stipulated penalty.

SCHEDULE A

1. Idylwyld Drive from 20th Street south to Circle Drive;
2. Circle Drive South from Idylwyld Drive east to Highway No. 11;
3. Circle Drive North from Millar Avenue east and south to College Drive;
4. Attridge Drive from Circle Drive to Central Avenue;
5. Circle Drive west from Idylwyld Drive South to Airport Drive

SIDE-BY-SIDE COMPARISON: NEW & CURRENT

Draft Proposed Bylaw	Current Bicycle Bylaw, No. 6884
1. OPERATION	
A person riding a bicycle:	
1) has the same rights and duties as a driver of a motor vehicle and is subject to the rules and regulations of the provincial Traffic Safety Act	10. Stunting Every person operating a bicycle shall have at least one hand on the handle bars at all times, and no person operating a bicycle shall perform or engage in any acrobatic or other stunt.
2) shall not ride without due care and attention	15. Due Care and Attention Every person operating a bicycle in a park shall do so with due care and attention and with reasonable consideration for other persons in such park.
3) shall not ride on a sidewalk unless permitted by signs or markings	
4) shall utilize only that portion of the street as is intended for the passage of motor vehicles, except that cyclists may ride in a parking lane	8. Position on Street Every person operating a bicycle shall utilize only that portion of the street as is intended for the passage of motor vehicles and shall be so positioned thereon as to be as close as is reasonably practicable to the right hand curb, except that any such person operating a bicycle may leave the proximity of the right hand curb when approaching an intersection and indicating an intention to turn by giving the required signal to that effect.
5) shall keep at least one hand on the handlebars at all times	
6) shall not ride other than upon or astride a regular seat of the bicycle	
7) shall not use it to carry more persons at one time than the number for which it is designed and equipped	11. Passengers No person shall operate a bicycle while carrying thereon any other person, except that such person may carry one passenger where the bicycle is equipped with a properly constructed pillion seat securely fastened over the rear wheel thereof.

Draft Proposed Bylaw	Current Bicycle Bylaw, No. 6884
8) shall not carry any package, bundle, or article which prevents the bicyclist from keeping both hands on the handlebars or obstructs their view	12. Loads No person shall operate a bicycle while carrying thereon any load in excess of twenty-five (25) kilograms, nor shall such load extend to a greater width than forty-five (45) centimetres on either side of the center line of the bicycle, nor to such a height as would obstruct the clear vision in all directions of the person operating the bicycle while seated on the seat thereof.
9) shall not ride on the left side of any two other bicycles being operated abreast on a street, except to pass	9. Two Abreast Except as is necessary for the purpose of passing, no person shall operate a bicycle on the left side of any two other bicycles being operated abreast.
10) shall not ride where signs and markings prohibit its use	
11) shall not perform or engage in any stunt or other activity that is likely to distract, startle or interfere with other transportation network users	10. Stunting Every person operating a bicycle shall have at least one hand on the handle bars at all times, and no person operating a bicycle shall perform or engage in any acrobatic or other stunt
12) must give a signal by hand and arm prior to turning in the following manner: <ul style="list-style-type: none"> a) when making a left-hand turn, by extending the left arm horizontally. b) when making a right-hand turn, by extending the left arm bent vertically upwards. 	

Draft Proposed Bylaw	Current Bicycle Bylaw, No. 6884
2 BICYCLE EQUIPMENT	EQUIPMENT
<p>A person shall not ride a bicycle during the period from one-half hour before sunset to one-half hour after sunrise, or at any other time when conditions of poor visibility exist, unless the bicycle has the following:</p> <ol style="list-style-type: none"> 1) at least one headlamp 2) at least one red rear light or red reflector 	<p>7. Lights and Reflective Devices No person shall operate a bicycle during the period from one-half hour after sunset to onehalf hour before sunrise, or at any other time when conditions of poor visibility exist, unless such bicycle is equipped</p>
<p>A person shall not ride a bicycle unless the bicycle has a functioning braking system adequate to control the movement of and to stop the bicycle whenever necessary.</p>	<p>5. Brakes No person shall operate a bicycle unless such bicycle is equipped with a braking mechanism adequate to control the movement of and to stop the bicycle whenever necessary. All such braking mechanisms shall be maintained in efficient working condition at all times.</p>
<p>A person shall not ride a bicycle unless the bicycle is equipped with a horn or bell capable of emitting sound audible under normal conditions for a distance of not less than thirty-five (35) metres.</p>	<p>6. Horn or Bell No person shall operate a bicycle unless such bicycle is equipped with a horn or bell capable of emitting sound audible under normal conditions for a distance of not less than thirty-five (35) metres.</p>
3 SIDEWALKS	
<p>No person, over the age of 14, shall drive a bicycle upon a sidewalk unless:</p> <ol style="list-style-type: none"> 1) the sidewalk is delineated as a Shared-Use Path by signage or pavement markings and they are operating at a moderate rate of speed, or so not to startle, endanger, or interfere with any other person, or 2) they are entering upon or leaving land adjacent to a street. 	

Draft Proposed Bylaw	Current Bicycle Bylaw, No. 6884
4 SHARED-USE PATHS	
On any river crossing, bridge, multi-use path, park trail, or sidewalk designated as a Shared-Use Path, every person operating a bicycle shall:	
1) comply with traffic signals, signs and markings	14. Comply with Traffic Signs Every person operating a bicycle in a park shall comply with the directions or regulations contained on any traffic sign in such park.
2) proceed with due care and attention and with reasonable consideration for all pedestrians and path users	15. Due Care and Attention Every person operating a bicycle in a park shall do so with due care and attention and with reasonable consideration for other persons in such park.
3) yield the right of way to all pedestrians, at all times	16. Yield Right of Way Every person operating a bicycle in a park shall yield the right of way to any pedestrian therein.
4) operate the bicycle to the right of the center of any such sidewalk, trail, or path, except when overtaking and passing a pedestrian or a bicyclist in the same direction	17. Operating on Left Prohibited Every person operating a bicycle upon any sidewalk, trail, or path in a park shall, except when overtaking and passing a pedestrian or bicyclist proceeding in the same direction, operate the bicycle to the right of the center of any such sidewalk, trail, or path.
5) alert anyone about to be overtaken by sounding a horn or a bell a reasonable amount of time before overtaking	18. Passing and Overtaking Every person operating a bicycle upon any sidewalk, trail, or path in a park shall sound a horn or bell prior to overtaking and passing any pedestrian or bicyclist proceeding in the same direction upon any such sidewalk, trail, or path.
6) operate at a moderate rate of speed, or so not to startle, endanger, or interfere with any other person.	19. Rate of Speed No person shall operate a bicycle in a park at an immoderate rate of speed, or so as to startle, endanger, or interfere with any other person in such park.

Draft Proposed Bylaw	Current Bicycle Bylaw, No. 6884
5 BRIDGES	BRIDGES
<p>In traversing any bridge or river crossing, a person operating a bicycle may:</p> <ol style="list-style-type: none"> 1) use that portion of the bridge or river crossing as is intended for the passage of motor vehicles; or, 	<p>20. In traversing any bridge or river crossing a person operating a bicycle may:</p> <ol style="list-style-type: none"> (a) subject to Section 22, utilize that portion of the bridge or river crossing as is intended for the passage of motor vehicles; or, (b) notwithstanding any other provision hereof, utilize the sidewalk portion of any bridge or river crossing.
<ol style="list-style-type: none"> 2) use the sidewalk portion of any bridge or river crossing as a Shared-Use Path. 	<p>21. Crossing on Sidewalk</p> <p>In traversing any bridge or river crossing upon the sidewalk as provided in Section 20(b), every person operating a bicycle shall:</p> <ol style="list-style-type: none"> (a) proceed with due care and attention and with reasonable consideration for all pedestrians; and, (b) yield the right of way to all pedestrians; and, (c) dismount and walk the bicycle when passing a pedestrian proceeding in the same direction upon such sidewalk.
6 CYCLE TRACKS	BICYCLE LANES
<p>A person riding a bicycle in a cycle track shall travel only in the direction designated for that lane.</p> <p>Vehicles other than bicycles may not drive, stand, stop or park in an exclusive bicycle lane or cycle track except:</p> <ol style="list-style-type: none"> 1) where the bicycle lane marking is dashed, motor vehicles may, when safe to do so, merge into the bicycle lane to make a turn. 2) where the bicycle lane is located between the travel lane and the parking lane, motor vehicles may, when safe to do so, cross the bicycle lane for parking the vehicle. 	<p>13. In any location where an exclusive lane for the passage of bicycles has been established and is so designated by traffic signs and pavement markings, every person operating a bicycle shall utilize such lane only, except that any such person may depart from the exclusive bicycle lane when approaching an intersection and indicating an intention to turn by giving the required signal to that effect.</p>

Draft Proposed Bylaw	Current Bicycle Bylaw, No. 6884
7 MOTORIST OVERTAKING A PERSON RIDING A BICYCLE	
<p>Every person in charge of a motor vehicle who is overtaking a person travelling on a bicycle on a street with one traffic lane in the direction of travel, shall, as nearly as may be practicable, leave a distance of not less than one meter between the bicycle and the motor vehicle and shall maintain that distance until safely past the bicycle. The one-meter distance required refers to the distance between the extreme right side of the motor vehicle and the extreme left side of the bicycle, including all projections and attachments.</p>	
8 FREEWAYS	FREEWAY SYSTEM
<p>No person shall operate a bicycle upon any of those streets set forth in Schedule “A”, except upon that portion of any such street as is clearly set aside and designated for the passage of bicycles.</p> <ol style="list-style-type: none"> 1. Idylwyld Drive from 20th Street south to Circle Drive; 2. Circle Drive South from Idylwyld Drive east to Highway No. 11; 3. Circle Drive North from Millar Avenue east and south to College Drive; 4. Attridge Drive from Circle Drive to Central Avenue; 5. Circle Drive west from Idylwyld Drive South to Airport Drive 	<p>22. Freeways No person shall operate a bicycle upon any of those streets set forth in Schedule "A" hereto, except upon that portion of any such street as is clearly set aside and designated for the passage of bicycles.</p> <ol style="list-style-type: none"> 1. Idylwyld Drive from 20th Street south to Circle Drive; 2. Circle Drive South from Idylwyld Drive east to Highway No. 11; 3. Circle Drive North from Millar Avenue east and south to College Drive; 4. Attridge Drive from Circle Drive to Central Avenue; 5. Circle Drive between 33rd Street and Airport Drive.
9 PENALTIES	PENALTIES
<p>The penalty for breach of any of the provisions of this Bylaw shall be as set forth in Schedule “B” hereto.</p> <p>Every person who breaches any of the provisions of this Bylaw is guilty of an offense and liable on summary conviction to a fine of (\$50.00) Dollars, hereinafter referred to as the stipulated penalty.</p>	<p>23. The penalty for breach of any of the provisions of this Bylaw shall be as set forth in Schedule "B" hereto.</p> <p>Every person who breaches any of the provisions of this Bylaw is guilty of an offense and liable on summary conviction to a fine of Fifty (\$50.00) Dollars, hereinafter referred to as the stipulated penalty.</p>

EXPLANATION OF CHANGES

1 OPERATION

Proposed Bylaw:

A person riding a bicycle:

- 1) has the same rights and duties as a driver of a motor vehicle and is subject to the rules and regulations of the provincial Traffic Safety Act
- 2) shall not ride without due care and attention
- 3) shall not ride on a sidewalk unless permitted by signs or markings
- 4) shall utilize only that portion of the street as is intended for the passage of motor vehicles, except that cyclists may ride in a parking lane
- 5) shall keep at least one hand on the handlebars at all times
- 6) shall not ride other than upon or astride a regular seat of the bicycle
- 7) shall not use it to carry more persons at one time than the number for which it is designed and equipped
- 8) shall not carry any package, bundle, or article which prevents them from keeping both hands on the handlebars or obstructs their view
- 9) shall not ride on the left side of any two other bicycles being operated abreast on a street, except to overtake
- 10) shall not ride where signs and markings prohibit its use
- 11) shall not perform or engage in any stunt or other activity that is likely to distract, startle or interfere with other transportation network users
- 12) must give a signal by hand and arm prior to turning in the following manner:
 - a) when making a left-hand turn, by extending the left arm horizontally.
 - b) when making a right-hand turn, by extending the left arm bent vertically upwards.

Changes:

- Removed requirement for people cycling to ride as close to curb as practicable.
- Added hand signaling requirement.
- Clarified the number of passengers allowed.
- Clarified allowable loads.

1.1 REMOVED REQUIREMENT FOR PEOPLE CYCLING TO RIDE AS CLOSE TO CURB AS PRACTICABLE

Former Bylaw

Every person operating a bicycle shall utilize only that portion of the street as is intended for the passage of motor vehicles and shall be so positioned thereon as to be as close as is reasonably practicable to the right hand curb, except that any such person operating a bicycle may leave the proximity of the right hand curb when approaching an intersection and indicating an intention to turn by giving the required signal to that effect.

Discussion

Best practice for cyclists is to ride in the middle of the right-hand lane to emphasise their presence in the road to drivers behind, or to stop them overtaking where it is not safe. It is not safe to ride too close to the curb because of the presence of the gutter as well as the 'door zone' close to parked cars.

1.2 ADDED HAND SIGNALING REQUIREMENT

Former Bylaw

Did not address hand signalling but alluded to it in Section 8, “...indicating an intention to turn by giving the required signal to that effect.”

Discussion

A key strategy for people riding bicycles on streets is to be as visible and as predictable as possible. Hand signalling by people riding bicycles lets other street users know what the cyclist is intending to do. A person operating a bicycle should signal when turning left and right or when changing lanes.

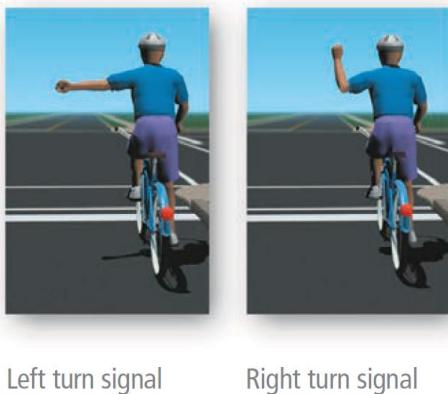


Figure 1 - Hand Signals (Nova Scotia's Driver Handbook 2013, p. 72)

1.3 CLARIFIED THE NUMBER OF PASSENGERS ALLOWED

Former Bylaw

No person shall operate a bicycle while carrying thereon any other person, except that such person may carry one passenger where the bicycle is equipped with a properly constructed pillion seat securely fastened over the rear wheel thereof.

Discussion

Bicycles are built for many purposes – some of which have been constructed expressly to transport multiple children. The proposed bylaw clarifies that a person riding a bicycle shall not use it to carry more persons at one time than the number for which it is designed and equipped.

1.4 CLARIFIED ALLOWABLE LOADS

Former Bylaw

No person shall operate a bicycle while carrying thereon any load in excess of twenty-five (25) kilograms, nor shall such load extend to a greater width than forty-five (45) centimetres on either side of the center line of the bicycle, nor to such a height as would obstruct the clear vision in all directions of the person operating the bicycle while seated on the seat thereof.

Discussion

The restriction of load size and weight is prohibitive to those who use their bike to travel carrying luggage or cargo, such as groceries. Quite often, people have bicycles built specifically for larger loads. Thus, the new bylaw simply restricts any load that could prevent the bicyclist from maintain control of their bicycle by keeping both hands on the handlebars. As well, any load that obstructs the view of the cyclist is to be avoided.

2 BICYCLE EQUIPMENT

Proposed Bylaw:

A person shall not ride a bicycle during the period from one-half hour before sunset to one-half hour after sunrise, or at any other time when conditions of poor visibility exist, unless the bicycle has the following:

- 1) at least one headlamp**
- 2) at least one red rear light or red reflector**

A person shall not ride a bicycle unless the bicycle has a functioning braking system adequate to control the movement of and to stop the bicycle whenever necessary.

A person shall not ride a bicycle unless the bicycle is equipped with a horn or bell capable of emitting sound audible under normal conditions for a distance of not less than thirty-five (35) metres.

Change:

- Added that a red rear reflector may be used instead of a light.

3 SIDEWALKS

Proposed Bylaw:

No person, over the age of 14, shall drive a bicycle upon a sidewalk unless:

- 1) the sidewalk is delineated as a Shared-Use Path by signage or pavement markings and they are operating at a moderate rate of speed, or so not to startle, endanger, or interfere with any other person, or
- 2) they are entering upon or leaving land adjacent to a street.

Changes:

- Reiterated sidewalk riding prohibition.
- Added allowance for children under 14.

3.1 REITERATED SIDEWALK RIDING PROHIBITION

Former Bylaw

Every person operating a bicycle shall utilize only that portion of the street as is intended for the passage of motor vehicles...

Discussion

Cyclists should be discouraged from riding on sidewalks where motorized traffic may turn across their paths, unless cyclists proceed at speeds not exceeding pedestrian traffic. By extension, crosswalk riding should also be prohibited except where shared-use crossings are indicated by signage and pavement markings. Many cities restrict riding on sidewalks except when designated as a “Shared-Use Path” where people cycling are to yield the right of way to people walking and to reduce operating speeds.

Adequate sight distance for the exit maneuver from the driveway is one of the most critical elements for restricting cycling on sidewalks. Sight distance is determined in consideration of the design speed of the intersection roadway and sight triangle requirements. It is often difficult to provide the desired sight distance due to restrictions created by parked cars, fencing and vegetation. Reduced sight distances are generally tolerable in situations due to the low operating speeds and caution exercised by drivers (TAC, 2017). Limited visibility does not afford the time for a motorist to perceive an approaching cyclist who is travelling faster than a pedestrian and closer to the motorist.

Cyclists who ride on the sidewalk face higher risks of collisions with motor vehicles at driveways, lanes and intersections. Aultman-Hall and Adams (1998) concluded through empirical evaluation that overall, travel on roads has the lowest injury and fall rates, followed by off-road paths and then sidewalks. Sidewalk cyclists incurred higher accident rates than road cyclists on both roads and paths and attributed



Figure 2 - Cross-ride example

this to their being less skilled. The authors recommended that sidewalk cyclists need to be trained rather than being told merely to cease cycling on sidewalks.

3.2 ADDED ALLOWANCE FOR CHILDREN UNDER 14

Former Bylaw

Did not specify a maximum allowable age for sidewalk riding.

Discussion

The previous bylaw did not indicate a maximum age allowable because the Summary Offences Procedure Act indicates that no person under the age of 12 years is liable to be convicted of an offence under any Act, regulation or bylaw. Thus, notices of violation are not issued to a person who is under 12 years of age. Many jurisdictions follow this reasoning and do not specify a maximum allowable age in their regulations.

The revised bylaw clarifies that sidewalk riding is allowed for children under the age of 14. Some jurisdictions specify a maximum allowable age of 14 or specify a maximum wheel diameter. At 14 years of age, children are high-school aged and on the cusp of receiving driver’s learner permits. At this age, young adults should be confident and capable to ride on the street.

Regulations that specifying the maximum wheel diameter focuses on the equipment rather than age or ability. The figure below shows the relative differences in wheel diameters for typical bicycles. A wheel diameter specification considers the ability of the person cycling rather than an absolute age. Adult bicycles usually have wheel diameters in excess of 50cm, except for increasingly popular folding bicycles. Enforcement in the field, conversely, is more difficult.



Figure 3- Comparison of wheel diameters

Table 1 - Comparison of Jurisdictions: Age and wheel diameter stipulations			
	Ages allowed on sidewalk	Wheel Diameter	Bicycle Type
Calgary	14		
Edmonton	not specified	Less than 50 cm	
Kelowna	12		Non-chain driven 3 or 4 wheeled cycle
Manitoba	not specified	Less than 41cm	
Ottawa	not specified		
Vancouver	16		

4 SHARED-USE PATHS

Proposed Bylaw:

On any river crossing, bridge, multi-use path, park trail, or sidewalk designated as a Shared-Use Path, every person operating a bicycle shall:

- 1) comply with traffic signals, signs and markings
- 2) proceed with due care and attention and with reasonable consideration for all pedestrians and path users
- 3) yield the right of way to all pedestrians, at all times
- 4) operate the bicycle to the right of the center of any such sidewalk, trail, or path, except when overtaking and passing a pedestrian or a bicyclist in the same direction
- 5) alert anyone about to be overtaken by sounding a horn or a bell a reasonable amount of time before overtaking
- 6) operate at a moderate rate of speed, or so not to startle, endanger, or interfere with any other person.

Changes:

- Clarified Shared Use designation.
- Applied rules for park trails to all shared-use facilities.

4.1 CLARIFIED SHARED USE DESIGNATION

Former Bylaw

Did not address Shared Use Path designations.

Discussion

Shared-Use Paths are a significant part of Saskatoon's All Ages and Abilities cycling system and pedestrian network. They are not restricted to park settings but comprise river crossings, bridges, multi-use paths, park trails, and designated sidewalks. As defined earlier, a Shared Use Path means multi-use path or sidewalk delineated by signage or pavement markings where people cycling share the facility with pedestrians. Stakeholders noted that any Shared Use path should be wider than 1.5 meters.



Figure 4 - Shared Use pathway sign



Figure 5 - Multi-Use Pathway (may or may not be signed as Shared Use)



Figure 6 - Sidewalk signed as Shared Use Path

4.2 APPLIED RULES FOR PARK TRAILS TO ALL SHARED-USE FACILITIES

Former Bylaw

Rules for sign compliance, sidewalk riding, due care and attention, passing pedestrians, and rates of speed applied only to park facilities.

Discussion

Shared-Use Paths are not restricted to park settings.

5 BRIDGES

Proposed Bylaw:

In traversing any bridge or river crossing, a person operating a bicycle may:

- 1) use that portion of the bridge or river crossing as is intended for the passage of motor vehicles; or,
- 2) use the sidewalk portion of any bridge or river crossing as a Shared-Use Path.

Change:

- Removed requirement for people cycling to dismount.

5.1 REMOVED REQUIREMENT FOR PEOPLE CYCLING TO DISMOUNT

Former Bylaw

In traversing any bridge or river crossing upon the sidewalk as provided in Section 20(b), every person operating a bicycle shall:

- (a) proceed with due care and attention and with reasonable consideration for all pedestrians; and,*
- (b) yield the right of way to all pedestrians; and,*
- (c) dismount and walk the bicycle when passing a pedestrian proceeding in the same direction upon such sidewalk.*

Discussion

The sidewalks on and approaching bridges and river crossings are designated as Shared-Use Paths and are a significant part of Saskatoon's all Ages and Abilities cycling system and pedestrian network. Many have steep grades that a new or nervous cyclist would not be able to comfortably cross. Therefore, people riding bicycles have the option of using the street or sidewalk. Note that cyclists are not to ride on freeways as per Section 8.

6 CYCLE TRACKS

Proposed Bylaw:

A person riding a bicycle in a cycle track shall travel only in the direction designated for that lane.

Vehicles other than bicycles may not drive, stand, stop or park in an exclusive bicycle lane or cycle track except:

- 1) where the bicycle lane marking is dashed, motor vehicles may, when safe to do so, merge into the bicycle lane to make a turn.**
- 2) where the bicycle lane is located between the travel lane and the parking lane, motor vehicles may, when safe to do so, cross the bicycle lane for parking the vehicle.**

Changes

- Added requirement for people cycling to ride in the direction of traffic.
- Removed requirement for people riding bicycles to use only exclusive bicycle lanes if present.

6.1 ADDED REQUIREMENT FOR PEOPLE CYCLING TO RIDE IN THE DIRECTION OF TRAFFIC

Former Bylaw

Did not specify direction of travel for cycle tracks or exclusive bicycle lanes.

Discussion

People must bike with the direction of traffic on a cycle track including an exclusive bicycle lane, unless otherwise signed. People riding bicycles are to be as visible and as predictable as possible, especially at conflict points with people driving, such as intersections and exiting driveways. Motorists naturally expect traffic nearest to them to be approaching from the left. A person riding a bike approaching on the right is counter to a turning motorist's expectations.

6.2 REMOVED REQUIREMENT FOR PEOPLE RIDING BICYCLES TO USE ONLY EXCLUSIVE BICYCLE LANES

Former Bylaw

In any location where an exclusive lane for the passage of bicycles has been established and is so designated by traffic signs and pavement markings, every person operating a bicycle shall utilize such lane only, except that any such person may depart from the exclusive bicycle lane when approaching an intersection and indicating an intention to turn by giving the required signal to that effect.

Discussion

Protected bike lanes, raised cycle track and shared paths are all considered part of Saskatoon's All Ages and Abilities (AAA) cycling network. AAA facilities provide separation between people driving and people cycling to ensure safety and comfort for both. AAA facilities provide a level of protection from motor vehicles that is welcoming to cyclists of all skill levels. Nevertheless, people cycling who are

comfortable riding with traffic and are able to sustain higher travel speeds may choose to ride in the traffic lanes with motor vehicles. For this reason, it is current practice not to legislate that cyclists use exclusive bike lanes only. Of cities studied, only Kelowna specifies that a person riding a bicycle must ride on a bicycle path or exclusive bike lane if one is available.

<i>Table 2 - Comparison of Jurisdictions: Must only use exclusive bike lanes</i>	
Calgary	No
Edmonton	No
Kelowna	Must, ride as near as practical to the right side of a highway, within a bicycle path if available
Ottawa	No
Regina	No
Toronto	No
Vancouver	No
Victoria	No
Winnipeg	No

7 MOTORIST OVERTAKING A PERSON RIDING A BICYCLE

Proposed Bylaw:

Every person in charge of a motor vehicle who is overtaking a person travelling on a bicycle on a street with one traffic lane in the direction of travel, shall, as nearly as may be practicable, leave a distance of not less than one meter (or three feet) between the bicycle and the motor vehicle and shall maintain that distance until safely past the bicycle. The one-meter distance required refers to the distance between the extreme right side of the motor vehicle and the extreme left side of the bicycle, including all projections and attachments.

Change:

- Added one-meter passing rule for two-way, single-lane streets.

7.1 ADDED ONE-METER PASSING RULE FOR TWO-WAY, SINGLE-LANE STREETS.

Former Bylaw

Did not address motorists overtaking cyclists.

Discussion

The Cities Act authorizes the City to pass bylaws regulating vehicles and pedestrians on the street as long as they do not conflict with The Traffic Safety Act (TSA) or other provincial legislation. The TSA sets out the basic rules of the road. The City is not able to modify the rules of the road. If the TSA provisions are followed, either the person riding a bicycle or the motor vehicle driver must move into a different lane to pass the person on a bicycle. Section 220 of the TSA indicates that no vehicle shall pass another vehicle unless it is safe to do so. However, the passing rule in the revised bylaw applies to when the traffic lane is reasonably and practicably wide enough for the motor vehicle to pass within the lane providing one-metre of clearance.

Section 228(1) of the provincial Traffic Safety Act addresses the rules of the road regarding traffic lanes:

228(1) If a highway is divided into traffic lanes, the following rules apply:

- (a) no driver of a vehicle shall fail to drive as nearly as is practicable entirely within one lane or shall drive from that lane to another unless it is safe to do so;
- (b) no driver of a vehicle shall drive from one traffic lane to another if a solid line exists between lanes except:
 - (i) if solid and broken lines exist together, in which case the driver may cross the solid line from a lane in which the broken line exists; or
 - (ii) if the lane is designated by signs as a two-way left turn lane;
- (c) no driver of a vehicle shall drive to the left of the centre of the highway where a solid line exists in the right-hand lane near the centre of the highway;
- (d) a driver of a vehicle may drive from one traffic lane to another if broken lines exist between lanes;

- (e) no driver of a motorcycle shall drive so that more than two motorcycles move abreast in a traffic lane at any time;
- (f) no driver of a motorcycle shall drive beside any other vehicle in the same traffic lane, unless that other vehicle is a motorcycle.

The TSA stipulates that vehicles, especially motor vehicles, are not supposed to “pass” another vehicle, including, a person on a bicycle, within the traffic lane. Either the person riding the bicycle has to move into another lane or the motor vehicle has to move into another lane (usually the left lane). Therefore, according to the TSA, no vehicle other than a motorcycle-sized vehicle can pass another motorcycle-sized vehicle in the same traffic lane.

<i>Table 3 - Comparison of Jurisdictions: One-meter passing rules</i>	
Alberta	Nearing implementation
Newfoundland & Labrador	Yes
Nova Scotia	Yes
Ontario	Yes

8 FREEWAYS

Proposed Bylaw:

No person shall operate a bicycle upon any of those streets set forth in Schedule “A” hereto, except upon that portion of any such street as is clearly set aside and designated for the passage of bicycles.

Change:

- Update of Schedule A: City of Saskatoon Freeway System to include Circle Drive South.

8.1 UPDATED SCHEDULE A: FREEWAY SYSTEM

Former Bylaw

1. *Idylwyld Drive from 20th Street south to Circle Drive;*
2. *Circle Drive South from Idylwyld Drive east to Highway No. 11;*
3. *Circle Drive North from Millar Avenue east and south to College Drive;*
4. *Attridge Drive from Circle Drive to Central Avenue;*
5. *Circle Drive between 33rd Street and Airport Drive.*

Discussion

The bylaw has not yet been updated to include Circle Drive South. Therefore, Schedule A, item 5, will be updated to read: “Circle Drive west from Idylwyld Drive South to Airport Drive.”

9 PENALTIES

Proposed Bylaw:

The penalty for breach of any of the provisions of this Bylaw shall be as set forth in Schedule "B" hereto.

Every person who breaches any of the provisions of this Bylaw is guilty of an offense and liable on summary conviction to a fine of (\$50.00) Dollars, hereinafter referred to as the stipulated penalty.

Change:

- None.

10 ELECTRIC OR POWER ASSISTED BICYCLES

Proposed Bylaw:

“Electric Bicycle” or “Power Assisted Bicycle” means a bicycle that combines muscular power propulsion with electric motor assistance as defined under the Motor Vehicle Safety Regulations (Canada) (C.R.C., c. 1038).

Change:

- Definition of electric bicycle.

10.1 DEFINITION OF ELECTRIC BICYCLE

Former Bylaw

Did not address electric bicycles.

Discussion

Power-assisted bicycles, or ‘e-bikes’, are becoming more prevalent as they combine muscular power propulsion with power assistance. No additional legislation is recommended at this time.

Under the Motor Vehicle Safety Regulations (Canada) (C.R.C., c. 1038), Section 2(1), provides nationwide parameters:

2 (1) **power-assisted bicycle** means a vehicle that:

- (a) has steering handlebars and is equipped with pedals,
- (b) is designed to travel on not more than three wheels in contact with the ground,
- (c) is capable of being propelled by muscular power,
- (d) has one or more electric motors that have, singly or in combination, the following characteristics:
 - (i) it has a total continuous power output rating, measured at the shaft of each motor, of 500 W or less,
 - (ii) if it is engaged by the use of muscular power, power assistance immediately ceases when the muscular power ceases,
 - (iii) if it is engaged by the use of an accelerator controller, power assistance immediately ceases when the brakes are applied, and
 - (iv) it is incapable of providing further assistance when the bicycle attains a speed of 32 km/h on level ground,
- (e) bears a label that is permanently affixed by the manufacturer and appears in a conspicuous location stating, in both official languages, that the vehicle is a power-assisted bicycle as defined in this subsection, and
- (f) has one of the following safety features,
 - (i) an enabling mechanism to turn the electric motor on and off that is separate from the accelerator controller and fitted in such a manner that it is operable by the driver, or

- (ii) a mechanism that prevents the motor from being engaged before the bicycle attains a speed of 3 km/h;

Section 247 of the provincial Traffic Safety Act addresses the rules regarding power assisted bicycles:

- 247(1) No person shall drive a power-assisted bicycle on a highway unless:
- (a) that person is 14 years of age or older;
 - (b) that person and any passenger are wearing, in the prescribed manner, a helmet that meets the prescribed specifications; and
 - (c) the power-assisted bicycle meets the prescribed equipment and safety standards required for the operation of that power-assisted bicycle.

10.2 FUTURE DIRECTION

Industry and jurisdiction governance is becoming more of an issue across Canada. WSP produced a primer and state of practice review in 2019 titled *Leading the Charge on Canadian E-bike Integration*. Pertinent discussion and recommendations for e-bikes ensue for the sake of discussion.

Bicycle-Style E-Bikes (BSEB): BSEB models have a similar physical appearance to non-motorized or conventional bicycles. In Canada, they are capped at 500 watts of power and a speed of 32km/h. They are also known across the globe as pedal-assist bicycles (PABs), pedelecs, and low-speed electric bicycles (MacArthur & Kobel). There are two key typologies within the BSEB category: pedal-assist and throttle-assist. With pedal-assist models, the motor only runs when the rider is pedalling, relieving excess physical strain and expanding the bicycling range. They are most commonly known as pedelecs and PABs.



Figure 7- Comparison of e-bikes (WSP, 2019, p. 48)

More powerful speed pedelecs are known as s-pedelecs, and operate at a higher maximum speed of 45km/h. Some pedelecs/PAB models offer a start-up aid, which allows the motor to run briefly (at a maximum speed of 6km/h) to help the rider start after a stop. A start-up aid is not the same functionality as a throttle. Models with start-up aids are still considered pedal-assisted. In contrast, throttle-assist models still operate the motor as the rider pedals, but can also run the motor independently from pedalling through a throttle - normally located on the handlebars. These models are known as throttle-assisted PABs.

Scooter-Style E-bikes (SSEB): SSEB models resemble mopeds in their frame and operate the motor independently from pedalling, via a throttle. However, to comply with the legal definition of an e-bike, SSEB models mandate pedals that could be operated by human-power. As such, SSEB models straddle the definition of electric bicycles; although their pedals are mandated, they are rarely functional. In Canada, they are capped at 500 watts of power and a speed of 32km/h. They are known as e-bikes, electric scooters and electric mopeds.

For the rest of this text, “e-bike” refers to a bicycle-style pedelec type e-bike, unless BSEB or SSEB is used to delineate one from the other.

Table 4 - Comparison of BSEBs and SSEBs

	Bicycle-Style E-Bike	Scooter-Style E-Bike
POWER MODE To legally comply with the definition of an e-bike, each model must have pedals that could be operated by human power.	Motor assists pedaling (with the optional throttle)	Motor runs independently from pedaling (with optional pedaling)
BATTERY RANGE For both models, battery life is commonly influenced by the quality of the manufacturer and the frequency of use.	30-70 km on average	~100 km on average
WEIGHT Generally, BSEB models are lighter than SSEB models.	Approximately 22-30 kg	Approximately 75-100 kg
MOTOR LOCATION Depending on the model and location, the location of the motor can vary.	Front-wheel, rear-wheel or hub options	Front-wheel, rear-wheel or hub options
LEGAL CLASSIFICATION Legal classifications vary depending on the region.	Legally classified as a bicycle in Canada	Legally classified as a bicycle in Canada

(Adapted from WSP, 2019, p. 7)

Regulation

Pedelecs and throttle-assisted pedal-assist bicycles are already regulated as bicycles, but are grouped together with Scooter Style E-Bikes (SSEBs). To maximize the potential of pedelecs/PABs as an integrated mobility option, they should be categorized separately from other e-bike models, and from each other. WSP recommends the following:

- Classify full-pedal assist bicycles a Type A-1 and throttle-assisted pedal-assist bicycles Type A-2 with the following stipulations.
 - Permit pedelecs and Permit Type A e-bikes similar to conventional bicycles.
 - Maintain the maximum speed of 32km/h
 - Maintain all other existing requirements of power-assisted bicycles
 - Require a speedometer on Type A e-bikes.
 - Require that the motor cease when human propulsion ceases for pedelecs, and that the motor ceases when brakes are applied for Type A-2.

Currently, s-pedelecs, Type B, are not permitted within the power-assisted bicycle definition as they exceed the maximum 32 km/h speed. The Bicycle Product Suppliers Association permits s-pedelecs as bicycles in their classification model given that the U.S. does not explicitly prohibit e-bikes that can travel at a speed higher than 32 km/h. Currently, Canada does not have a definition for s-pedelecs. Based on the lessons learned from the EU, it is recommended that s-pedelecs be clearly defined in provincial legislation as a type of moped with required licensing that would recognize their pedal-assist nature, but also recognize their increased speed to reduce potential injuries and mode conflicts. WSP recommends the following:

- Define Type B e-bikes as licensed motor vehicles.
- Indicate a unique definition for Type B e-bikes within the existing moped definition

With the above recommendations, SSEBs, classified as Type C, would still exist within the e-bike classification, as they functionally match the legal description of power-assisted bicycles. However, SSEB can be regulated via weight, wheel diameter requirements or specific pedal functionality. In the proposed bylaw, the person riding an e-bike must “pedal for propulsion” thus requiring functioning pedals. WSP recommends the following:

- Define a functional difference between Type A-2 and Type C through regulation requiring human-propulsion, maximum wheel size and maximum weight (similar to Ontario’s regulation)
- Require a speedometer on Type C e-bikes
- Prohibit Type C on multi-use trails and other off-road facilities
- Require Type C E-bikes to operate in motor vehicle travel lanes, similar to motor vehicles.

Table 5 – Recommended Regulatory Framework for BSEBs and SSEBs			
Bicycle Style E-Bikes	PEDELEC/PEDAL-ASSISTED E-BIKES		Type A
	1) Full pedal-assist Pedal-assists motor Max speed: 32km/h	2) Pedal-assist + throttle Pedal-assists motor + throttle that can replace pedaling Max speed: 32km/h	
	SPEED-PEDELECS (S-PEDELECS)		Type B
Full pedal-assist Pedal-assists motor Max speed: 45km/h Treated as a motor vehicle. Not allowable under Canada’s Motor Vehicle Safety Regulations			
	SCOOTER-STYLE E-BIKES		Type C
	Throttle-assist + functional pedals Motor is run by throttle + bicycle pedals that can propel the bike Max speed: 32km/h Delineate from Type A-2 by weight and human propulsion Treated as a motor vehicle.		

Table 6 – Comparison of Jurisdictions: Power-Assisted Bicycles

	Min. Age	Helmet required	Weight limit (kg)	Min. Wheel size	Other
Alberta	12	Yes			
British Columbia	16	Yes			
Manitoba	14	Yes			
Newfoundland & Labrador		Yes			
Ontario	16	Y	120	35mm/350 mm	
Toronto			40		
Ottawa			55		No hand or foot clutch
Saskatchewan	14	Yes			

Other provinces add no other requirements or reference Government of Canada’s Motor Vehicle Safety Regulations.

11 HELMETS

Proposed Bylaw:

- None, but the City will continue to recommend helmet use by all cyclists and passengers and encourage provincial legislation for cyclists under 18 years of age.

Change:

- None.

11.1 DISCUSSION

Saskatchewan has no helmet legislation at the provincial level, yet this has not precluded cities from enacting rules regarding helmets. For example, both Yorkton and Moose Jaw have adopted bylaws requiring mandatory helmet use; Yorkton's law applies to all cyclists, while Moose Jaw's applies to cyclists under 18 years of age.

Helmet use while cycling is regulated in seven provinces. Helmets are mandatory for all ages in British Columbia, New Brunswick, Newfoundland & Labrador, Nova Scotia and Ontario. Helmets are mandatory for those under 18 in Alberta and Manitoba.

Notwithstanding regulation, opponents to helmet regulation cite that the expense of helmets is a barrier to increasing cycling mode share and that motorists take greater risks when approaching cyclist wearing helmets.

The Administration will continue to recommend helmet use by all cyclists and passengers and encourage provincial legislation for cyclists under 18.

Table 7 – Comparison of Jurisdictions: Helmets Required

	Status
Alberta	Under 18
British Columbia	All Ages
Manitoba	Under 18
New Brunswick	All Ages
Newfoundland & Labrador	All Ages
Northwest Territories	None
Nova Scotia	All Ages
Nunavut	None
Ontario	All Ages
Prince Edward Island	None
Quebec	None
Saskatchewan	None
Yukon	None

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REGULATIONS REVIEWED

SASKATCHEWAN	The Traffic Safety Act, Chapter T-18.1
Regina	Bylaw No. 9900
ALBERTA	Traffic Safety Act
Edmonton	Bylaw 5590 - Traffic Bylaw
Edmonton	Bylaw 2202 - Parkland Bylaw (Trail Use)
Calgary	Traffic Bylaw Number 26M96
Calgary	Parks and Pathways Bylaw Number 20M2003
BRITISH COLUMBIA	Motor Vehicle Act [RSBC 1996] Chapter 318
Kelowna	Consolidated Traffic Bylaw No. 8120
Victoria	Streets and Traffic Bylaw No. 09-079
Vancouver	Street and Traffic Bylaw No. 2849
MANITOBA	The Highway Traffic Act, C.C.S.M. c. H60
Winnipeg	Traffic By-Law No. 1573/77
ONTARIO	Highway Traffic Act, R.S.O. 1990, c. H.8
Toronto	Toronto Municipal Code Chapter 886, Footpaths, Pedestrian Ways, Bicycle Paths, and Cycle Tracks
Toronto	Toronto Municipal Code Chapter 950, Traffic and Parking
Ottawa	By-Law No. 2003-530
OREGON	Oregon Revised Statutes, Vol. 17
Portland	City Charter, Title 16 Vehicles and Traffic

APPENDIX A: BICYCLE BYLAW, NO. 6884

Bylaw No. 6884

A Bylaw of The City of Saskatoon to control and regulate the operation of bicycles upon and in the streets, parks, and other places in the City of Saskatoon.

**Codified to Bylaw No. 8994
(December 19, 2011)**

BYLAW NO. 6884

A Bylaw of The City of Saskatoon to control and regulate the operation of bicycles upon and in the streets, parks, and other places in the City of Saskatoon.

The Council of The City of Saskatoon enacts as follows:

Short Title, Interpretation and Application

Short Title

1. This Bylaw may be cited as "The Bicycle Bylaw".

Interpretation

2. In this Bylaw:
 - (a) "Act" means The Highway Traffic Act of the Province of Saskatchewan and all amendments thereto;
 - (b) "bicycle" means any muscular propelled, chain-driven wheeled device in, on, or by which a person is or may be transported or drawn;
 - (c) "curb" means the dividing line between that portion of any street intended for the passage of motor vehicles and that intended primarily for the use of pedestrians, whether marked with any form of curbstone or not;
 - (d) "License Bylaw" means Bylaw No. 6066 of The City of Saskatoon and all amendments thereto;
 - (e) "park" means any improved or unimproved lands owned by or subject to the direction and control of The City of Saskatoon and intended for the recreational use and enjoyment of the general public, and, without limitation, includes all those areas encompassed by what is commonly known as the Meewasin Valley Trail, and all lands and environs associated therewith;
 - (f) "pedestrian" means any person on foot or in a wheelchair;

- (g) "sidewalk" means that portion of any street intended primarily for use by pedestrians;
- (h) "street" means all or any part of a road allowance, highway, road, lane, bridge, place, alley, square, thoroughfare, or way intended for or used by the general public for the passage of vehicles or pedestrians;
- (i) "Traffic Bylaw" means Bylaw No. 4284 of The City of Saskatoon and all amendments thereto;
- (j) "traffic sign" means any sign, signal, marking, or other device, placed painted, or erected for the guidance, regulation, warning, direction, or prohibition of traffic;
- (k) any other words shall, insofar as they are not inconsistent with this Bylaw, have the same meaning as in the Act.

3. **Application**

This Bylaw shall apply to the operation of all bicycles upon or in the streets, parks, and other public places in the City of Saskatoon.

LICENSE

4. Repealed by Bylaw No. 7387 - December 20, 1993

EQUIPMENT

5. **Brakes**

No person shall operate a bicycle unless such bicycle is equipped with a braking mechanism adequate to control the movement of and to stop the bicycle whenever necessary. All such braking mechanisms shall be maintained in efficient working condition at all times.

6. **Horn or Bell**

No person shall operate a bicycle unless such bicycle is equipped with a horn or bell capable of emitting sound audible under normal conditions for a distance of not less than thirty-five (35) metres.

7. **Lights and Reflective Devices**

No person shall operate a bicycle during the period from one-half hour after sunset to one-half hour before sunrise, or at any other time when conditions of poor visibility exist, unless such bicycle is equipped with and displays an operating headlight together with a red rear light or reflective device.

OPERATION

8. **Position on Street**

Every person operating a bicycle shall utilize only that portion of the street as is intended for the passage of motor vehicles and shall be so positioned thereon as to be as close as is reasonably practicable to the right hand curb, except that any such person operating a bicycle may leave the proximity of the right hand curb when approaching an intersection and indicating an intention to turn by giving the required signal to that effect.

9. **Two Abreast**

Except as is necessary for the purpose of passing, no person shall operate a bicycle on the left side of any two other bicycles being operated abreast.

10. **Stunting**

Every person operating a bicycle shall have at least one hand on the handle bars at all times, and no person operating a bicycle shall perform or engage in any acrobatic or other stunt.

11. **Passengers**

No person shall operate a bicycle while carrying thereon any other person, except that such person may carry one passenger where the bicycle is equipped with a properly constructed pillion seat securely fastened over the rear wheel thereof.

12. **Loads**

No person shall operate a bicycle while carrying thereon any load in excess of twenty-five (25) kilograms, nor shall such load extend to a greater width than forty-five (45) centimetres on either side of the center line of the bicycle, nor to such a height as would obstruct the clear vision in all directions of the person operating the bicycle while seated on the seat thereof.

BICYCLE LANES

13. In any location where an exclusive lane for the passage of bicycles has been established and is so designated by traffic signs and pavement markings, every person operating a bicycle shall utilize such lane only, except that any such person may depart from the exclusive bicycle lane when approaching an intersection and indicating an intention to turn by giving the required signal to that effect.

PARKS

14. **Comply with Traffic Signs**

Every person operating a bicycle in a park shall comply with the directions or regulations contained on any traffic sign in such park.

15. **Due Care and Attention**

Every person operating a bicycle in a park shall do so with due care and attention and with reasonable consideration for other persons in such park.

16. **Yield Right of Way**

Every person operating a bicycle in a park shall yield the right of way to any pedestrian therein.

17. **Operating on Left Prohibited**

Every person operating a bicycle upon any sidewalk, trail, or path in a park shall, except when overtaking and passing a pedestrian or bicyclist proceeding in the same direction, operate the bicycle to the right of the center of any such sidewalk, trail, or path.

18. **Passing and Overtaking**

Every person operating a bicycle upon any sidewalk, trail, or path in a park shall sound a horn or bell prior to overtaking and passing any pedestrian or bicyclist proceeding in the same direction upon any such sidewalk, trail, or path.

19. **Rate of Speed**

No person shall operate a bicycle in a park at an immoderate rate of speed, or so as to startle, endanger, or interfere with any other person in such park.

BRIDGES

20. In traversing any bridge or river crossing a person operating a bicycle may:

- (a) subject to Section 22, utilize that portion of the bridge or river crossing as is intended for the passage of motor vehicles; or,
- (b) notwithstanding any other provision hereof, utilize the sidewalk portion of any bridge or river crossing.

21. **Crossing on Sidewalk**

In traversing any bridge or river crossing upon the sidewalk as provided in Section 20(b), every person operating a bicycle shall:

- (a) proceed with due care and attention and with reasonable consideration for all pedestrians; and,
- (b) yield the right of way to all pedestrians; and,
- (c) dismount and walk the bicycle when passing a pedestrian proceeding in the same direction upon such sidewalk.

FREEWAY SYSTEM

22. Freeways

No person shall operate a bicycle upon any of those streets set forth in Schedule "A" hereto, except upon that portion of any such street as is clearly set aside and designated for the passage of bicycles.

PENALTIES

23. The penalty for breach of any of the provisions of this Bylaw shall be as set forth in Schedule "B" hereto.

MISCELLANEOUS AND TRANSITION

24. Application of Act and Traffic Bylaw

Except to the extent that they are inconsistent herewith, the relevant provisions of both the Traffic Bylaw and the Act are applicable to the operation of bicycles in the City of Saskatoon.

25. Paramountcy

In the event of any conflict between the provisions of this Bylaw and those contained in Parks Bylaw No. 3187 of The City of Saskatoon, the provisions of this Bylaw shall govern and supersede such Bylaw No. 3187.

26. Consequential Amendments

Paragraphs 4-26, 4-27, and 10-1 through 10-9 inclusive of the Traffic Bylaw, together with the penalties applicable thereto as set forth in Schedule 12-1 of the Traffic Bylaw, are hereby repealed.

27. **Coming into Force**

This Bylaw shall come into force and take effect on the 2nd day of May, A.D. 1988.

Read a first time this 2nd day of May, A.D. 1988.

Read a second time this 2nd day of May, A.D. 1988.

Read a third time and passed this 2nd day of May, A.D. 1988.

"C. Wright"

Mayor

"Susan MacKeigan"

Acting City Clerk

(SEAL)

"APPROVED IN ACCORDANCE WITH PROVISIONS
OF THE URBAN MUNICIPALITY ACT, 1984

DATE: June 23, 1988

D. Abbey

HIGHWAY TRAFFIC BOARD"

SCHEDULE "A"

CITY OF SASKATOON FREEWAY SYSTEM

1. Idylwyld Drive from 20th Street south to Circle Drive;
2. Circle Drive South from Idylwyld Drive east to Highway No. 11;
3. Circle Drive North from Millar Avenue east and south to College Drive;
4. Attridge Drive from Circle Drive to Central Avenue;
5. Circle Drive between 33rd Street and Airport Drive.

SCHEDULE "B"

PENALTIES

1. Every person who breaches any of the provisions of this Bylaw is guilty of an offense and liable on summary conviction to a fine of Fifty (\$50.00) Dollars, hereinafter referred to as the stipulated penalty.
2. The stipulated penalty shall be discounted to the amount of Twenty-five (\$25.00) Dollars, hereinafter referred to as the discounted penalty, if paid or remitted on a voluntary basis in accordance with the provisions set forth hereunder:
 - (a) The Police Department of The City of Saskatoon shall issue a Notice in a form approved by the Chief of such Department to every person alleged to have breached any provision of this Bylaw, requiring every such person to pay or remit unto the City Treasurer of The City of Saskatoon the discounted penalty within fourteen (14) calendar days of the date of the Notice.
 - (b) The discounted penalty may be paid or remitted in any of the following manners:
 - (i) in person, during regular office hours, to the cashier located at City Hall, Saskatoon, Saskatchewan; or,
 - (ii) by deposit, at the depository located at the main entrance to City Hall, Saskatoon, Saskatchewan; or,
 - (iii) by mail, postmarked within the prescribed fourteen (14) day period, to the Office of the City Treasurer, City Hall, Saskatoon, Saskatchewan, S7K 0J5.

Any person requiring a receipt shall attend and pay in person as provided in sub-paragraph (i) above.

 - (c) Upon payment of the discounted penalty in the manner provided herein, no person shall be liable to prosecution with respect to the circumstance described in the Notice to which such payment pertains.
3. The stipulated penalty may be paid in the manner provided herein at any time prior to the date that a person is required to appear in Court to answer a charge under this Bylaw, and, upon payment, the person shall not be liable to further prosecution with respect to such charge.

APPENDIX B: STAKEHOLDER ENGAGEMENT

STAKEHOLDER ENGAGEMENT

INITIAL ENGAGEMENT

The project invited 14 stakeholder organizations and two City of Saskatoon Advisory Committees to comment on the current bylaw and to submit considerations for a new bylaw. The engagement consisted of an initial meeting with each group to explain the goals and objectives as well as detailed explanations on the application and limitations of bylaws. Three organizations responded with detailed recommendations, seven had general comments; three had detailed comments pertaining to helmet use, and the rest declined to respond formally.

Organization	Response
Biketrix (e-bike manufacturer)	General comments
Canadian Paediatric Society (CPS)	Recommendation pertaining to helmets
City of Saskatoon Accessibility Advisory Committee	Asked to be informed only
City of Saskatoon Traffic Safety Committee (now dissolved)	Stressed need for conformity with TSA
Greater Saskatoon Catholic Schools (GSCS)	General comments
Meewasin Valley Authority (MVA)	General comments
Saskatchewan Cycling Association (SCA)	Asked to be informed only
Saskatchewan Government Insurance (SGI)	Stressed need for conformity with TSA
Saskatchewan Health Authority (SHA)	Detailed recommendations Recommendation pertaining to helmets
Saskatchewan Prevention Institute (SPI)	Recommendation pertaining to helmets
Saskatoon and District Safety Council (SDSC)	Stressed need for conformity with TSA
Saskatoon Council on Aging	Asked to be informed only
Saskatoon Cycles (SC)	Detailed recommendations
Saskatoon Public Schools (SPS)	General comments
Walking Saskatoon (WS)	Detailed recommendations

The following table lists recommendations from stakeholders and whether the changes were included in the proposed new bylaw.

	Recommended by	Included in proposed bylaw
OPERATION		
Remove requirement for people cycling to ride as close to curb as practicable	SC, SHA	Yes
Removed stunting prohibition	SC	Yes
Added hand signaling requirement		
Clarified the number of passengers allowed	SC	Yes
Clarified allowable loads	SC, SHA	Yes
BICYCLE EQUIPMENT		
Remove Bell Requirement	SC	No
SIDEWALKS		
Clarified Shared Use designation	SC, SHA	Yes
Added applicability to children under 14	SC, GSCS, SPS, SHA, WS	Yes
If the street has become hazardous, allow people to ride bikes on sidewalks at pedestrian speed	SC, SHA, WS	No
SHARED-USE PATHS		
Applied rules for park trails to all shared-use facilities	WS	Yes
If a cyclist might startle due to large load or narrow passing room, shall dismount.	WS	No
INTERSECTIONS		
Crosswalks, dismount or ride at pedestrian speed	WS	No
BRIDGES		
Removed requirement for people cycling to dismount	SHA	Yes
EXCLUSIVE BICYCLE LANES		
Removed requirement for people riding bicycles to use only exclusive bicycle lanes	SC, SHA	Yes
MOTORIST OVERTAKING A PERSON RIDING A BICYCLE		
Added one-meter passing rule for two-way, single-lane streets.	SC, SHA	Yes
HELMETS		
Mandatory helmets for youth	CPS	No
Mandatory helmet use for all	SPI, SDSC	No
Encourage the use of bike helmets	SHA, SC	Yes

ROUNDTABLE MEETING

The stakeholder engagement concluded with a roundtable meeting on September 26, 2019 with all stakeholders in addition to the Active Transportation Advisory Group (ATAG). The Administration presented the proposed bicycle bylaw. Most items were accepted unanimously except the items dealing with sidewalk riding and helmet use.

Participants:	Al Reichert – Saskatoon Safety Council Cora Janzen – Population and Public Health – Saskatchewan Health Authority Curt McCoshen – Bus Riders of Saskatoon Dwight Kirkpatrick – Saskatoon Public School Division Erin Akins – University of Saskatchewan Ingrid Larson – Saskatoon Cycles Jasmine Hasselback – Population and Public Health – Saskatoon – Saskatchewan Health Authority Jeananne Klein – Saskatoon Council on Aging Joel Lloyd – Greater Saskatoon Catholic Schools Kelly Klassen – SGI Sherry Faris – SaskAbilities Paula Lichtenwald – Tourism Saskatoon Tim Brown – Member of Public Tyler Rittinger – Saskatoon Public School Division Verna Gallen – Walking Saskatoon
City of Saskatoon:	Danae Balogun – Active Transportation Manager Carly Grassing – Transportation Engineer Jay Magus – Director of Transportation Marina Melchiorre – Senior Transportation Engineer Councillor Dubois Sharon Cybulski – Assistant to Director of Transportation (recorder)
Regrets:	Alan Otterbein – Meewasin Cara Zukewich – Saskatchewan Prevention Institute Dr. Karen Leis – Canadian Paediatric Society Wayne MacDonald – Saskatoon Cycles Councillor Loewen Jordan Sherbino – Policy and Communications Advisor, Office of the Mayor

1 Introductions

Danae welcomed everyone to the meeting. Meeting started at 3:03 pm. Roundtable introductions were done.

2 Bicycle Bylaw Overview

Marina reviewed the principles of the update and timelines regarding amendments to the bike bylaw. The bylaw encompasses behaviour for others as well as cyclists.

Administration will present the draft bike bylaw report at the Standing Policy Committee on Transportation on November 4, 2019 and at City Council on November 18, 2019. City Solicitor's Office will then review wording for the bylaw. It is anticipated the bylaw would be enacted in spring 2020 followed by education and enforcement campaigns.

Participants were invited to submit written questions to Marina by October 9 so they can be incorporated into the draft bike bylaw report before it goes to Standing Policy Committee on Transportation.

Power-assisted bicycles won't be discussed today. They are controlled federally.

3 Discussion of draft modifications to bike bylaws

Helmets

City will recommend helmet use for all cyclists and recommend provincial legislation for cyclists under 18 years of age.

Comments/feedback:

- Support for mandatory use of helmets. (Saskatoon Safety Council)
- Support for promoting helmet use and not mandating as it has risks, especially for people who can't afford helmet. (Population and Public Health – Saskatchewan Health Authority)
- Helmet requirements is a barrier for bike sharing programs. (University of Saskatchewan)
- Inquiry about any data on socio-economic concerns from other provinces. (Greater Saskatoon Catholic Schools) Administration will do further investigation on what other provinces are doing in terms of socio-economic concerns regarding helmet use.
- Some research studies regarding helmet use and reducing head injuries had research methodological errors. It was noted that controlling exposure to risk for the likelihood of injury (prevention) was more effective.

There was consensus on the recommendation regarding helmets.

Motorist Overtaking a Person Riding a Bicycle (1 meter rule)

Recommendation to add one-meter passing rule for two-way, single-lane streets.

Comments/feedback:

- One meter is not very far for a bus or truck. Air around these vehicles will create difficulty for a cyclist going down the street. Important to emphasize distance of at least one meter. (Saskatoon Safety Council)
- Important to communicate how long a meter is. One meter rule is also known as the three foot rule. (Tourism Saskatoon)
- Language regarding this is confusing and is subjective to interpretation. Language needs to be strengthened.

There was consensus on the concept.

Sidewalks

No person over the age of 14 shall ride on sidewalks. Can ride on sidewalks if designated as shared-use paths.

Comments/feedback:

- Suggest designating more places like Taylor Street. Need to make transitions from street to sidewalk level easier. (Bus Riders of Saskatoon)
- More sidewalks should be designated as shared use. More bike education is needed on how to ride on a sidewalk. (Saskatoon Cycles)
- Need to do an analysis of streets where riding on sidewalks is happening most frequently. People are more likely to ride on sidewalks where they feel safer.

- It was noted there is no safe place to ride on the following streets: 22nd Street, 8th Street, Idylwyld Drive and College Drive. Other high volume streets are 54th Street and Clarence Avenue. Snow clearance is an issue for winter cyclists. More work is needed.
- Pedestrian safety as it relates to cyclists riding on sidewalks is an issue, especially on shared paths. (Walking Saskatoon) Walking Saskatoon also noted a preference for cyclists to have separate facilities.
- It was noted there are sometimes more bikes on sidewalks than pedestrians.
- Size of sidewalks is concern; not all sidewalks can accommodate shared use.
- Education is needed regarding pedestrian courtesy on designated sidewalks.

There was consensus on the concept.

Shared-Use Paths

See wording on page 20 of the draft bylaw.

Comments/feedback:

- Don't use the shared pathway on Preston Avenue from 14th Street to College Drive because you don't get any indication that a bike is coming. (Saskatoon Council on Aging)
- Shared-use paths are not ideal. The best scenario would be for each stream to have their own path.
- Biggest risks on shared-use path is to the young and elderly. (Walking Saskatoon)
- Education about shared-use path becomes primary.
- University of Saskatchewan has a traffic bylaw that applies to their grounds. Important to work together with Meewasin, University and the City to ensure interpretation of what is considered a sidewalk and shared-use path is consistent. All paths at the university are shared-use path. (University of Saskatchewan)
- Need clarity on what is meant by moderate rate of speed (walking or jogging speed). Suggest putting definition in the bylaw. (Walking Saskatoon)
- Education is needed for everyone on shared-use paths. (Saskatoon Safety Council)
- Challenges encountered include cyclists not yelling or using bell when passing pedestrians and pedestrians with headphones/earbuds not hearing what is going on around them.

There was consensus on the concept.

Bridges

Bridge is considered a street.

Comments/feedback:

- Provide clarification on what is meant by river crossing so as not to include freeways.
- Inquiry if there should be one-way cycling traffic on bridge crossing. Currently not under consideration at this time.

There was consensus on the concept.

Cycle Tracks

Designated areas for cyclists only. Replaces exclusive bike lane in the bylaw.

They are adjacent to the driving lane on College Drive, Warman Road and Preston Avenue. People could be ticketed for parking in bike lanes.

Comments/feedback:

- Written feedback received from Saskatoon Safety Council.

There was consensus on the concept.

Operation

Follow the same rules in *The Traffic Safety Act*.

Comments/feedback:

- Inquiry about impairment. This is covered under *The Traffic Safety Act* as well as cell phone use.

There was consensus on the concept.

Bicycle Equipment

Comments/feedback:

- Requirement to have lights would be a barrier to low income people; lights are expensive and there is a risk they could be stolen.
- Keep red reflectors in the bylaw.

There was general consensus on the concept.

Freeways

No cycling on freeways. Update to include Circle Drive South.

Comments/feedback:

- Need to clearly identify prohibition for cycling on freeways.

There was general consensus on the concept.

Additional Comments

Appreciation was extended to participants for their feedback.

Participants were encouraged to forward written comments to Marina by October 9.

Participants are welcome to speak at the City Council meeting on November 18.

Saskatoon Safety Council representative appreciated the opportunity to provide input. Using roadways safely is a priority and the bike bylaw will help in that.

APPENDIX C: STAKEHOLDER CORRESPONDENCE

October 30th 2018

To the City of Saskatoon:

Although bicycling is an enjoyable activity and a popular mode of transportation, it is also a leading cause of injuries in Canadian children and youth. Head injuries in particular can cause life long consequences, and represent half of hospitalizations for bicycling injuries in children.ⁱ It has now been well documented in the medical literature that helmets have a protective effect on head and facial injuries.^{ii iii} Riders are more likely to wear helmets where mandatory bike helmet laws are in place, and injury rates are at least 25% lower compared to areas without legislation.^{iv}

Concerns around helmet legislation have centered on a few issues. Firstly, the question of decreased ridership has been examined and most Canadian studies show that mandatory helmets have no effect on bicycling rates.^v Secondly, it appears that legislation will increase helmet use substantially even without enforcement, however for this effect to be maintained long term, some level of moderate enforcement is needed.^{vi} Finally, accessibility of helmets is of primary importance, and subsidy programs and/or rebates for lower income riders have been implemented elsewhere successfully.^{vii} Given that citizens experiencing poverty have an increased risk of preventable injuries^{viii}, helmet legislation coupled with measures to make helmets more available and affordable, would be an effective strategy to improve the health of this vulnerable sector of our city.

The Canadian Paediatric Society (CPS) recommends that all jurisdictions in Canada legislate and enforce bicycle helmet use for all ages.^{ix} Unfortunately, the province of Saskatchewan has lagged behind and is one of only two provinces that scores poorly with respect to helmet legislation, in the CPS status report on Canadian public policy and child and youth health.^x Other recommendations include rolling out legislation with an education campaign on the importance of helmet use, incorporating other strategies to prevent bicycling injuries such as separation of riders from motor traffic, and implementing programs to make bike helmets less expensive.

The cities of Moose Jaw and North Battleford have already implemented mandatory bike helmets for youth. The city of Saskatoon now has an opportunity to also show leadership in this area, and improve the safety of all its riders, by making use of bicycle helmets mandatory for all ages.

Sincerely,

Dr. Karen Leis
General Pediatrician, Saskatoon
Canadian Paediatric Society Board Member

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- ⁱ Hu X, Wesson DE, Chipman ML, Parkin PC. Bicycling exposure and severe injuries in school-age children: A population-based study. *Arch Pediatr Adolesc Med* 1995;149(4):437-41.
- ⁱⁱ Thompson DC, Rivara FP, Thompson R. Helmets for preventing head and facial injuries in bicyclists. *Cochrane Database Syst Rev* 2000;(2):CD001855.
- ⁱⁱⁱ Elvik R. Publication bias and time-trend bias in meta-analysis of bicycle helmet efficacy: A re-analysis of Attewell, Glase and McFadden, 2001. *Accid Anal Prev* 2011;43(3):1245-51.
- ^{iv} Macpherson A, Spinks A. Bicycle helmet legislation for the uptake of helmet use and prevention of head injuries. *Cochrane Database of Systematic Reviews* 2007, Issue 2. DOI: 0.1002/14651858.CD005401.pub2.
- ^v Dennis J, Potter B, Ramsay T, Zarychanski R. The effects of provincial bicycle helmet legislation on helmet use and bicycle ridership in Canada. *Inj Prev* 2010;16(4):219-24.
- ^{vi} LeBlanc JC, Beattie TL, Culligan C. Effect of legislation on the use of bicycle helmets. *CMAJ* 2002;166(5):592-5.
- ^{vii} "Low Cost Bike Helmet Program Extended", *Winnipeg Sun*, May 30th, 2012, <https://winnipegsun.com/2012/05/30/low-cost-bike-helmet-program-coming/wcm/9e6b6d8c-bc13-4c78-a511-33d4b59631d2>
- ^{viii} Yanchar NL, Warda LJ, Fuselli P; Canadian Paediatric Society, Injury Prevention Committee. Child and youth injury prevention: A public health approach. *Paediatr Child Health* 2012;17(9):511.
- ^{ix} Hagel BE, Yanchar NL; Canadian Paediatric Society, Injury Prevention Committee. Bicycle helmet use in Canada: The need for legislation to reduce the risk of head injury. *Paediatr Child Health* 2013;18(9):475-80.
- ^x Canadian Paediatric Society, 2012. Are We Doing Enough? A status report on Canadian public policy and child and youth health.

Bicycle helmet use in Canada: The need for legislation to reduce the risk of head injury

Brent E Hagel, Natalie L Yanchar; Canadian Paediatric Society
, Injury Prevention Committee
Paediatr Child Health 2013;18(9):475-80
Posted: Nov 1 2013

Abstract

Bicycling is a popular activity and a healthy, environmentally friendly form of transportation. However, it is also a leading cause of sport and recreational injury in children and adolescents. Head injuries are among the most severe injuries sustained while bicycling, justifying the implementation of bicycle helmet legislation by many provinces. There is evidence that bicycle helmet legislation increases helmet use and reduces head injury risk. Evidence for unintended consequences of helmet legislation, such as reduced bicycling and greater risk-taking, is weak and conflicting. Both research evidence to date and recognition of the substantial impact of traumatic brain injuries support the recommendation for all-ages bicycle helmet legislation.

Key Words: Bicycle helmet; Head injuries; Legislation

Bicycling is a popular activity and form of transportation in Canada for children, adolescents and adults. The percentage of children that have ridden a bicycle at least once in the past 12 months is 91% for children five to 12 years of age and 77% for youth 13 to 17 years of age.^[1] While the physical activity associated with riding a bicycle can have significant health benefits, injuries can and do occur.

Bicycling injuries

Bicycling-related injuries among Canadian children and youth account for approximately 4% of all injuries encountered in the emergency department (ED),^{[2][3]} 7% of all hospital admissions for unintentional injury for

those younger than 15 years of age,^[4] and are the fifth-leading cause of child and youth hospitalization (2079 in 2001/2002).^[5] In terms of mortality, they comprise 5% of all deaths due to unintentional injury for children younger than 15 years of age in Canada.^[4] Between 30%^[6] and 53% of bicycling fatalities occur in children and youth, with most resulting from collisions with motor vehicles.^[7]

There are large variations in population-based rates of bicycling-related injuries due to several factors. Adolescents, particularly males, have the highest rates of bicycling-related injuries involving motor vehicle collisions, ranging from 28 to 56 per 100,000 population.^{[8][9]} Rates of hospitalization for children and youth range from 33.9 injuries per 100,000 in urban areas to 50 injuries per 100,000 in rural areas.^[10] Overall death rates in Canada are estimated to be 0.27 per 100,000 population.^[6]

Bicycling-related head injuries

Head injuries rank among the most severe injuries in bicyclists, representing 20% to 40% of all bicycling injuries encountered in Canadian EDs.^{[2][3][11]-[14]} Considering only hospital admissions, head injuries represent approximately one-half of all bicycling injuries in children and youth.^{[11][15]} Ultimately, head injuries account for 45% to 100% of child and youth bicycling deaths.^{[16]-[20]} Therefore, head injuries represent the most severe injuries that occur among child and youth bicyclists and, as such, are an important target for injury prevention.

Helmet use and head injury risk

Two systematic reviews have demonstrated that helmets reduce the risk of head injuries while cycling.

[21][22] In one Cochrane review, helmets were estimated to reduce the risk of head and brain injuries by 69%, severe brain injuries by 74% and facial injuries by 65%, with similar effects for cyclists in collisions with motor vehicles and across all age groups.[22] Another study[21] found that helmets reduced head injury risk by 60%, brain injury risk by 58%, facial injuries by 47% and fatal injury by 73%. The latter study did note an indication of greater risk of neck injuries among helmet users (OR 1.36 [95% CI 1.0 to 1.86]), which "...may not be applicable to the lighter helmets currently in use".[21] Investigators concluded that their results were "applicable to riders of all ages, both in less severe crashes, and in collisions with motor vehicles." [21] A reanalysis of this study in 2011, which included more recent studies and adjustment for potential sources of bias, confirmed the protective effect of helmets on head injuries and facial injuries, although the effects were attenuated.[23]

Helmet legislation and helmet use

Systematic reviews have also demonstrated that legislation increases the use of helmets in children and youth.[24][25] One review showed that bicycle helmet use increased postlegislation, with more than one-half of the included studies demonstrating an increase of at least 30%.[24] The odds of helmet use more than quadrupled with legislation, and this effect was consistent for areas with legislation for riders younger than 16 years of age and in areas where all-ages legislation was in place.[24] Similarly, a Cochrane systematic review of child and youth bicycle helmet legislation found a significant increase in helmet use

both postlegislation and with enforcement of existing legislation.[25]

Many of the studies examining the association between helmet use and bicycle helmet legislation in Canada have found increases in the postlaw period (Table 1). One Ontario study noted a 20% increase in helmet use among children five to 14 years of age two years after passage of helmet legislation covering riders younger than 18 years of age, demonstrating larger increases in low- and middle-income areas.[26] A follow-up study found that helmet prevalence fell to prelegislation levels for low- and middle-income areas while remaining elevated in high-income areas six years postlegislation.[27] After the introduction of all-ages bicycle helmet legislation in 1996 in British Columbia, helmet use increased 18% among children younger than six years of age and 26% among riders six to 15 years of age.[28] Another study found that helmet use increased 35% among children, 41% among adolescents and 50% among adults after all-ages legislation passed in Nova Scotia.[29] Helmet use increased from 72% to 95% among children younger than 13 years of age and more than doubled among adolescents after helmet legislation covering riders younger than 18 years of age came into effect in Alberta.[30] Based on national Canadian Community Health Survey self-report data, a recent study has found the likelihood of helmet use to be greatest in provinces with all-ages legislation, followed by regions with laws covering riders younger than 18 years of age, and lowest where there is no helmet legislation; these trends were evident for both adolescents and adults.[31]

TABLE 1
Changes in helmet use following the implementation of bicycle helmet legislation in Canada

Author [reference], year	Age group covered	Year implemented	User prevalence		Postlaw increase
			Prelegislation	Postlegislation	
Parkin et al [26], 2003	<18 years of age	1995	5–14 years of age: LI: 33% in 1995 MI: 50% in 1995 HI: 73% in 1995 Total: 46% in 1995	5–14 years of age: LI: 61% in 1996 MI: 79% in 1996 HI: 77% in 1996 Total: 66% in 1997	5–14 years of age: LI: 28% MI: 29% HI: 4% Total: 20% (1997)
Macpherson et al [27], 2006	<18 years of age	1995	5–14 years of age: LI: 33% in 1995 MI: 50% in 1995 HI: 73.1% in 1995	5–14 years of age: LI: 33% in 2001 MI: 50.4% in 2001 HI: 84.5% in 2001	5–14 years of age: LI: 0% MI: 0.4% HI: 11.4%
Foss and Beirness [28], 2000	All ages	1996	1–5 years of age: 60% in 1995	1–5 years of age: 78% in 1999	1–5 years of age: 18%
			6–15 years of age: 35% in 1995	6–15 years of age: 61% in 1999	6–15 years of age: 26%
			16–30 years of age: 47% in 1995	16–30 years of age: 69% in 1999	16–30 years of age: 22%
LeBlanc et al [29], 2002	All ages	1997	Child: 49% in 1995/1996	Child: 84% in 1998/1999	Child: 35%
			Adolescent: 29% in 1995/1996	Adolescent: 70% in 1998/1999	Adolescent: 41%
Karkhanavah et al [30], 2011	<18 years of age	2002	<13 years of age: 72% in 2000	<13 years of age: 95% in 2006	<13 years of age: 23%
			13–17 years of age: 30% in 2000	13–17 years of age: 63% in 2006	13–17 years of age: 33%

LI Low income; HI High income; MI Middle income

Helmet legislation and head injuries

Of the three studies included in a systematic review examining changes in head injury risk pre- and postlegislation, two indicated a statistically significant reduction in risk and one a nonstatistically significant reduction in risk.^[25] A Canadian study compared time trends in head injury rates among children and adolescents five to 19 years of age between provinces

that had introduced legislation with those that had not.^[32] While their head injury rates were similar before legislation (approximately 18 per 100,000 population), these rates fell by 45% in provinces that introduced helmet legislation compared with only 27% in provinces that did not.^[32] An Australian study investigating the long-term effects of all-ages bicycle helmet legislation on head and arm injuries in riders younger than 16 years of age^[33] found a decline in

rates of hospitalization for bicycle- versus motor vehicle-related head injuries in children postlegislation (3.1% per year), with no evidence of a decline in arm injury hospitalizations. The rate of non-motor vehicle-related child cyclist head injuries was estimated to decrease as well (1.2% per year), a result that was not statistically significant.

Two recently published studies reported different conclusions regarding the association between helmet legislation and head injuries. One compared the population-based rate and proportion of ED and hospitalized head injuries for bicyclists and pedestrians three years before, and four years after, bicycle helmet legislation in Alberta.^[34] They found significant declines in the proportion of children younger than 13 years of age seen in the ED, and of adolescents (13 to 17 years of age) and adults (≥ 18 years of age) hospitalized for head injuries, with no declines in the proportion of head injuries for a control group of pedestrians. Another study examined hospitalizations for bicycle-related head injuries Canada-wide from 1994 to 2008.^[35] Comparing the population-based rate and proportion of head injuries in Canadian provinces that did or did not implement helmet legislation, they were unable to demonstrate a significant association between legislation alone (all ages or children only) and a decline in head injuries, with rates of helmet use and head injuries generally declining in all jurisdiction regardless of legislation status.

Importantly, none of the studies evaluating the effect of bicycle helmet legislation identify whether a helmet was being worn by injured bicyclists. Because it is largely unknown whether cases sustaining head injuries wore a helmet, these studies are weaker than other case-control studies that have firmly established bicycle helmet effectiveness. Also, studies that simply compare jurisdictions with and without helmet legislation are probably affected by other factors associated with helmet legislation, such as educational programs or incentives. Certainly the strongest evaluation of the effect of helmet legislation is whether it affects helmet-use prevalence, with the downstream effect being a reduction in the number and severity of head injuries manifesting from greater helmet use.

Helmet use and risk compensation

Debate continues on the general topic of risk compensation (ie, risk homeostasis) in relation to bicycle helmet use.^{[36][37]} The theory suggests that everyone has a target level of risk. Its proponents argue that if an individual's environment is altered to

increase safety, they will respond by acting more dangerously to meet their own target level of risk.^[38] However, the theory also suggests that people often take risks to optimize benefits (eg, gaining time by speeding).^[39] The evidence for risk compensation and bicycle helmet use among children is mixed. In some studies, parents report they would allow children wearing safety gear, including a helmet, to take more risks.^{[40][41]} Other studies measuring risk tolerance in children suggest a greater willingness to take risks when using safety gear while bicycling.^[42] Still others have found no relationship between safety gear use and risk tolerance.^[40]

A crossover trial of an obstacle course comparing conditions involving safety gear and no safety gear found that "children went more quickly and behaved more recklessly when wearing safety gear than when not wearing gear, providing evidence of risk compensation".^[43] Adult-based studies have been conflicting, showing that helmeted cyclists tend to be more cautious^[44] or less cautious^[45] than nonhelmeted cyclists.

One ED-based study found no evidence of a relationship between use of safety equipment and reported bicycling behaviour (cycling fast, taking chances) or injury severity among children injured in a variety of activities, including bicycling.^[46] Another found that helmeted bicyclists experienced less severe nonhead and non-neck injuries.^[47] Injury outcome-based studies involving all age groups have found that helmeted bicyclists experienced more frequent and severe nonhead injuries compared with nonhelmeted bicyclists.^[48] However, one European study found no relationship between bicyclist commission of a traffic violation and helmet use.^[49] The issue of risk compensation remains unresolved.^[23]

Helmet use and ridership

A number of reports and studies have examined the argument that helmet legislation may reduce ridership among children and adolescents, thereby contributing to problems associated with decreased physical activity. One Australian study indicated a decline in bicycling associated with helmet legislation implemented in 1990 in all age groups. However, the rates for adults approached prelaw levels after two years, while the decline for children reflected a pre-existing downward trend. The rate for adolescents remained below prelaw levels two years postlegislation.^[50] Another study noted small but statistically significant declines in youth cycling after

legislation in various states in the United States, based on parent- and youth-reported bicycling behaviour.^[51] However, an observational Ontario study found no evidence of a decline in cycling activity among children five to 14 years of age after introduction of bicycle helmet legislation.^[52] While there was significant year-to-year variability in the rate of bicycling at different locations, none could be attributed to the adoption of bicycle helmet legislation. A follow-up study showed the same rate of bicycling prelegislation and six years postlegislation.^[27] Similarly, Canadian survey data indicate no evidence of a decline in adolescent bicycling in relation to bicycle helmet legislation.^[31] A decline in the number of observed child and adult – but not adolescent – bicyclists associated with helmet legislation was observed in one Alberta study.^[53] This inconsistent effect across age groups suggests that other factors aside from the helmet law may be responsible for changes in bicycling.

A related issue is whether all-ages bicycle helmet legislation would negatively influence the implementation of urban community, low-cost bicycle rental or bikeshare programs. Increasing bicycle use is desirable from an individual and societal perspective. However, not having easy access to a helmet may be a deterrent to renting a bicycle for short trips in urban areas, especially where helmet use is mandatory. Investigators in Canada and the United States have shown that the prevalence of helmet use was lower among users of a bikeshare program relative to those using personal bicycles.^{[54][55]} However, some bikeshare rental companies offer helmet dispensing stations (<http://sandvault.com/sandvault-announces-helmetstation/>). Their effect on helmet use is not yet known.

In summary, the evidence of a reduction in bicycling among children and adolescents following helmet legislation is mixed, and few studies have adequately accounted for existing bicycling trends independent of a helmet law. While some individuals may avoid bicycling due to helmet legislation, it would need to be shown that they do not replace it with other physical activities for helmet legislation to be considered to have a negative effect on overall health.

Helmet use and enforcement

One single county-based study conducted in the United States noted a change in helmet prevalence of 43% after helmet legislation, a substantial increase that occurred with almost no enforcement.^[56] However, another study found that negligible helmet use in a

rural Georgia community with helmet legislation covering young riders increased significantly after a combined helmet promotion, giveaway and enforcement program.^[57] Systematic review of the effect of bicycle helmet legislation has suggested significant increases in helmet use even with limited enforcement.^[24] Canadian studies appear to support this,^[30] reporting high postlegislation bicycle helmet use rates with moderate enforcement activities.^[29] One Ontario study showed that negligible enforcement (in terms of citations) may have contributed to bicycle helmet use returning to prelegislation levels for low- and middle-income children and youth six years after the helmet law came into effect, while remaining above prelegislation levels for children in high-income areas.^[27] Therefore, available evidence suggests that bicycle helmet legislation can increase use even without significant enforcement, at least for a few years after implementation. This finding speaks volumes for the ‘education effect’, although the sustained effectiveness of bicycle helmet legislation likely requires ongoing promotion and enforcement.

Helmet use and nonlegislated interventions

There is growing evidence that a multifaceted approach to behaviour change is more successful than isolated interventions. Several studies have demonstrated the efficacy of nonlegislated interventions in increasing bicycle helmet use among children.^[58] However, the effect of social marketing in increasing helmet use among teens and adults has not been clearly established. Also, the effects of nonlegislated interventions alongside legislation are not fully understood, but it is likely that combined synergies between two approaches would be more successful than either one by itself. Alongside education and policy implementation would be environment- or engineering-based injury prevention efforts,^{[59][60]} and public health strategies such as sales tax rebates and children’s tax credits for the purchase of protective helmets.^{[61][62]} Although this statement focuses on the promotion of bicycle helmet use to reduce injuries through legislative interventions, the importance of a multifaceted approach, concurrent with education and enforcement, cannot be underestimated.

Recommendations for policy

There is strong evidence that bicycle helmet legislation increases bicycle helmet use. There is also ample research indicating that legislation reduces risk of bicycle-related head injury. Evidence of the potential

negative effects of bicycle helmet legislation, such as reduced bicycling, is mixed, and a direct cause-and-effect relationship has not been demonstrated. Based on current evidence, bicycle helmet legislation is recommended to both increase helmet use and reduce head injury risk for children and adolescents. While legislation has positive effects on helmet use, these are further compounded by enforcement and education. All of these policies, however, should be implemented in context with wider road safety initiatives such as traffic calming and the separation of cyclists from motor vehicles.

Legislation that requires all bicyclists to wear helmets – regardless of age – has a number of potential benefits. All cyclists are at risk for head injury, and the protective effect of bicycle helmets has been well established for every age group.^[63] In addition, children are far more likely to use helmets in the presence of adults wearing helmets.^[64] Legislation that is Canada-wide in scope and effects is preferable to an age/location restrictions or another segmented approach. [Table 2](#) lists current Canadian provincial/territorial bicycle helmet legislation status along with CPS recommendations from its status report, ‘[Are We Doing Enough?](#)’^[65]

TABLE 2 The status of bicycle helmet legislation in all provinces/territories, with Canadian Paediatric Society (CPS) recommendations*			
Province/Territory	2011 status†	Recommended actions	
British Columbia	Excellent	Meets all CPS recommendations	
Alberta	Good	Amend current legislation to include all age groups	
Saskatchewan	Poor	Enact legislation that requires all age groups to wear helmets. Some education programs are available	
Manitoba	Good**	Amend current legislation to include all age groups	
Ontario	Good	Amend current legislation to include all age groups	
Quebec	Poor	Enact legislation that requires all age groups to wear helmets. Some education programs are available	
New Brunswick	Excellent	Meets all CPS recommendations	
Nova Scotia	Excellent	Meets all CPS recommendations	
Prince Edward Island	Excellent	Meets all CPS recommendations	
Newfoundland and Labrador	Poor	Enact legislation that requires all age groups to wear helmets	
Yukon	Poor	Enact legislation that requires all age groups to wear helmets	
Northwest Territories	Poor	Enact legislation that requires all age groups to wear helmets	
Nunavut	Poor	Enact legislation that requires all age groups to wear helmets	
*Adapted from reference [65]. †Excellent: Province/territory has legislation requiring all cyclists to wear helmets, with financial penalties for noncompliance. Parents are responsible for ensuring their child wears a helmet; Good: Province/territory has legislation requiring all cyclists younger than 18 years of age to wear a helmet; Poor: Province/territory has no legislation on bike helmets **Legislation effective May 2013			

Recommendations

Based on current evidence and the importance of preventing head injuries in children and youth, the

CPS makes the following recommendations:

- All jurisdictions in Canada should legislate and enforce bicycle helmet use for all ages.
- Legislation should be rolled out using social marketing and education to raise awareness of bicycle helmet efficacy, accessibility and importance.
- Other strategies to prevent bicycling injuries, such as separating riders from motor traffic with bicycle lanes, pathways for commuting and recreational cycling, and community safety programs should be implemented concurrently.
- Physicians should counsel families about the importance of wearing bicycle helmets. Where all-ages legislation does not exist, parents should wear a bicycle helmet to model good behaviour and protect themselves.
- Sales tax exemptions or rebates and federal tax credits to make the purchase of bicycle helmets less expensive should be adopted.

Future research should explore both the intended and potential unintended effects of bicycle helmet legislation, with focus on:

- Long-term follow-up to assess the effects of bicycle helmet legislation on compliance, prevalence and head injury rates, with appropriate control for trends in other traffic safety initiatives.
- How enforcement activities influence helmet compliance and prevalence.
- The level of bicycling activity after implementation of helmet legislation, with appropriate control for independent and pre-existing trends in bicycling.

Acknowledgements

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CPS INJURY PREVENTION COMMITTEE

Members: Suzanne Beno MD; Claude Cyr MD; Brent E Hagel PhD; I Barry Pless MD (past member); Jeffrey W Scott MD; Natalie L Yanchar MD (Chair); Mitchell Zelman MD (Board Representative)

Liaisons: Dominic Allain MD, CPS Paediatric Emergency Medicine Section; Pamela Fuselli, Parachute – Leaders in Injury Prevention; Robin Skinner, Public Health Agency of Canada

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City of Saskatoon Bicycle Bylaw Review Response

Submitted by Population and Public
Health, Saskatoon and Area

June 2018

Bylaw Section	Issue	Evidence, data, rationale	Suggested recommendation
#3	One-metre passing rule	COS proposed no potential bylaw modification	Even though it is addressed in the Traffic Safety Act, it would be useful to include the wording with the municipal bylaw to reinforce
#6	Horn or bell	COS potential modification: A person riding a bicycle on a sidewalk designated as a “Shared Pathway”, multi-use pathway, or park trail shall: a) operate the bicycle to the right of center of any such sidewalk, trail, or path: and b) alert anyone about to be overtaken by sounding a horn or a bell a reasonable amount of time before overtaking.	We are supportive of the COS potential modification
#8	Riding on sidewalks and Saskatoon Cycles recommendation		We support Saskatoon Cycles’ recommendation; potentially designate sidewalks along certain arterials* as shared use pathways *when no protected/separate-from-traffic cycling facilities are provided and there is higher risk to ride in the traffic lane due to traffic volumes and/or speed
#8	Position on street: “...positioned thereon to be as close as reasonably possible to the right hand curb...” <ul style="list-style-type: none"> Current wording encourages people who are cycling to move in and out of sight/between parked cars This makes the rider unpredictable and diminishes visibility 	In regard to the COS potential modification: “A person riding a bicycle shall utilize only that portion of the street as is intended for the passage of motor vehicles, except that cyclists may ride in an unmarked parking lane.” We were not clear on the difference (or necessity of) between marked or unmarked parking lanes. The wording (highlight) is awkward; the word ‘passage’ may lead to some ambiguity.	Suggested wording: “A person riding a bicycle shall utilize the travel lanes, except that cyclists may ride in a parking lane.” *can add motor vehicle travel lanes if you feel it is necessary to the above suggested wording
#9	Two abreast	Can you ride two abreast or not? Wording is ambiguous and meaning unclear (we interpreted the current wording to indicate circumstances of if there is a third rider and not specifically addressing if people can ride two abreast or not)	Clarify wording to identify that you can actually ride two abreast; also make it clear you cannot go more than two abreast

#12	Loads	COS potential modification: “No person riding a bicycle shall carry any package, bundle or article which prevents the rider from keeping at least one hand on the handlebars or interferes with the normal operation of the bicycle.”	We are supportive of the COS potential modification.
#13	Bicycle Lanes	In regards to only permitted <i>“to depart from the exclusive bicycle lane when approaching an intersection...”</i> – what about if accessing a mid-block driveway that is on the opposite side of street and it makes most sense for person cycling to travel in the vehicle lane to make the left turn (as a car would) to access the mid-block driveway? COS – repeal section 13	We are supportive of repealing section 13
#17	Operating on left prohibited		Potentially modify wording to be easier to read and to similar to the wording in the horn section (see #6 above)
#18	Passing and overtaking		Incorporate similar wording in regards to the horn as to the Horn or Bell section (#6 above)
#19	Rate of speed	The current bylaw wording only includes in a park	Expand to include ‘sidewalk designated as a “Shared Pathway”, multi-use pathway, or park trail’
#21 (c)	<i>“Dismount and walk bicycle when passing a pedestrian proceeding in the same direction upon such sidewalk”</i>	Impractical, especially when going up the bridge at an incline COS – repeal this section and designate as shared use pathway	We are supportive of repealing this section and designating as shared use pathway
	Distracted riding	Is this covered by the Traffic Safety Act with distracted driving?	Possibly include something to address this in the municipal bylaw
	Helmet bylaw recommendation	<i>Evidence review & policy analysis will be provided mid-August</i>	



August 29, 2018

To City of Saskatoon Administration:

Through the Bicycle Bylaw update process, it was requested that Population and Public Health (PPH), Saskatoon, provide their perspective on a recommendation regarding a bicycle helmet bylaw.

In 2016, the Saskatoon Health Region (SHR) released the Unintentional Injury Report which included the Chief Medical Health Officer's recommendation of: "Encourage the use of bicycle helmets within Saskatoon Health Region". Given the request from the City and the policy window, PPH decided to review the evidence (literature and local data) regarding helmet legislation/bylaw as a population level intervention once again to see if the recommendation should change.

The process we undertook included an evidence review of investigating the research literature as well as our local hospitalization data for motor vehicles, pedestrians and bicycling injuries. The final step was a policy analysis on the dimensions of effectiveness, unintended effects, equity, cost, feasibility and acceptability.

Through this evidence review process and based on:

- inconsistent (and/or tenuous because of methodological flaws of earlier research) evidence of helmet legislation having a strong impact at a population level;
- the local data in terms of bicycling injury hospitalization data (numbers, rate, exposure-based risk rate, TBI contribution) is not indicating that bicycling-related injuries are the highest concern;
- the overall policy analysis of a helmet bylaw (in terms of effectiveness, unintended effects, equity, cost, feasibility and acceptability), which illuminated risks and drawbacks that could negatively impact health equity, health outcomes and progress on creating safe environments for all modes of transportation;

It is the recommendation of Population and Public Health, Saskatoon that:

1. the Chief Medical Health Officer recommendation in the Saskatoon Health Region Unintentional Injury Report (2016) remain unchanged "Encourage the use of bicycle helmets within Saskatoon";
2. the City of Saskatoon does not proceed with a bicycle helmet bylaw.

For the summary policy analysis for each of the dimensions, please refer to the report included with this letter.

On behalf of the Medical Health Officers and our practitioners involved in this work, we encourage the City and other stakeholders to promote bicycle helmet use, other than through bylaws, as well as continue to improve the safety of the infrastructure to address the root causes of collisions, bicycle injury and improving the safety for all modes.

Sincerely,

Cordell Neudorf
B.Sc., M.D., M.H.Sc., FRCPC
Lead Medical Health Officer

Policy Analysis of Bicycle Helmet Bylaw/Legislation – Population and Public Health, Saskatoon

Introduction

The City of Saskatoon is updating their Bicycle Bylaw and engaged Population and Public Health (PPH), Saskatoon as a stakeholder. Through the process, they requested PPH, Saskatoon to make a recommendation regarding a bicycle helmet bylaw.

In 2016, the Saskatoon Health Region (SHR) released the [Unintentional Injury Report](#) which included the Chief Medical Health Officer's recommendation of: "Encourage the use of bicycle helmets within Saskatoon Health Region". Given the request and the policy window, PPH decided to review the evidence (literature and local data) once again to see if the recommendation should change.

A review of the literature was completed as well as analysis of SHR and Saskatoon data regarding hospitalization numbers, hospitalization rates, exposure-based risk rates, body part analysis and a traumatic brain injury (TBI) contribution from all head and neck injuries.

For the analysis of the data, the modes of motor vehicles, bicycling and pedestrians were the focus, not including recreational (e.g., off-road). Playground injury data was included as a comparison as this is a common injury mechanism for children.

The final step of the analysis process, included using the National Collaborating Centre of Health Public Policy's [framework for analyzing policy](#) to analyze six dimensions (effectiveness, unintended effects, equity, cost, feasibility and acceptability) in regards to the potential policy recommendation. The ratings were subjective from each practitioner based on their review of the evidence, perspectives and knowledge and ranged from +++ to --- (+ meaning favourable; - meaning unfavourable).

Local Data

i.e., Saskatoon and/or Saskatoon Health Region (SHR) for local context for evidence-informed decision making

Table 1: SHR Hospitalization Transportation Mode & Playground Injury 2004/05-2014/15

		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	Avg per year
Number of hospitalization	Pedestrians	25	26	37	32	30	29	25	36	32	24	28	29
	Bicycle	31	32	21	24	18	19	13	28	26	24	29	24
	Motorcycle	24	12	22	20	27	24	37	25	25	28	13	23
	MVC	122	116	106	154	142	121	123	124	113	110	97	121
	Off-Road	16	15	22	17	30	31	15	32	27	34	31	25
	Other	51	48	34	55	35	38	26	25	26	26	18	35
	Playground	25	19	25	29	25	27	21	21	28	29	34	26
	Population	287,296	289,495	285,618	291,110	298,371	300,638	318,503	318,102	323,938	336,403	346,363	
Hospitalization rates	Pedestrians	8.7	9.0	12.9	11.0	10.1	9.6	7.8	11.3	9.9	7.1	7.9	9.5
	Bicycle	10.9	11.1	7.4	8.2	6.0	6.3	4.1	8.8	8.0	7.1	8.4	7.8
	Motorcycle	8.2	4.1	7.7	6.8	9.0	8.0	11.6	7.9	7.7	8.2	3.8	7.5
	MVC	42.4	40.2	37.2	52.8	47.7	40.1	38.6	38.9	34.8	32.8	27.9	39.1
	Off-Road	5.5	5.3	7.8	5.8	10.1	10.3	4.7	10.0	8.3	10.2	8.9	8.0
	Other	17.8	16.7	11.7	18.7	11.7	12.7	8.2	7.9	8.0	7.6	5.2	11.2
	Playground	8.7	6.7	8.8	10.0	8.4	9.0	6.6	6.6	8.5	8.6	9.8	8.3

MVC = motor vehicle collisions

- Highest hospitalization rates for transportation are seen for motor vehicle collisions at an average of 39.1 per 100,000 population (Table 1). Bicycling-related hospitalization rate is second lowest across the six transportation mode categories
- For Saskatoon residents, there are about 22 bicycling-related hospitalizations per year, 22 pedestrian-related and 67 motor-vehicle-related hospitalizations (data not shown)

Table 2: Saskatoon Exposure-Based Hospitalization Injury Rates, 2013

Saskatoon	Percent of all trips	Annual number of trips	Annual number of trips by mode	Average trip distance (km)	Annual distance travelled	Annual hospitalization Saskatoon	Hospitalization per 100 million km	Teschke article
MVC	82	288,602,000	236,653,640	5.75	1,360,758,430	67	4.9	72
Pedestrians	4	288,602,000	11,544,080	1.5	17,316,120	22	127.0	196
Bicyclists	4	288,602,000	11,544,080	3.4	39,249,872	22	56.1	264

Source: City of Saskatoon Household Travel Survey, 2013

- In order to more accurately represent injury risk by transportation mode, we undertook exposure-based analysis to assess the degree of risk for traveling by motor vehicles, bicycling, and walking. These rates are represented on a per 100 million kilometre basis.
- For the City of Saskatoon, exposure-based hospitalization rates for MVC were the lowest (4.9), bicycling followed (56.1) and pedestrian rates were the highest (127.0; Table 3).
- Bicycling has a hospitalization risk rate 11x higher than for MVC; walking has 2.3x higher hospitalization risk rate than bicycling; and walking has 26x higher risk rate than MVC.
- Note: Teschke et al (2013) was the first study to use a exposure-based analysis rather than only an absolute burden or a population-based rate of injury. The numbers from their study are included for information purposes.

Table 3: SHR Body Part Analysis 2004/05-2014/15 Combined By Transportation Mode & Playground Injury

Body part analysis		Lower Extremities	Torso	Upper Extremities	Spinal Cord/Vertebra	All head and neck	Unclassified/Multiple Sites	Total	TBI contribution to head and neck	Potential Number of TBI per year
	Pedestrians	49.0%	15.2%	10.2%	4.0%	19.8%	1.9%	100.0%	17.9%	5
	Bicycle	29.0%	15.1%	30.3%	2.3%	22.6%	0.8%	100.0%	18.5%	4
	Motorcycle	44.6%	17.6%	20.2%	5.9%	10.6%	1.2%	100.0%	8.6%	2
	MVC	23.3%	28.3%	10.4%	11.9%	24.0%	2.0%	99.9%	19.4%	23
	Off-Road	28.1%	21.1%	23.2%	8.3%	18.5%	0.7%	100.0%	14.1%	4
	Other	33.8%	23.3%	17.9%	13.0%	11.8%	0.3%	100.0%		N/A
	Playground	8.5%	0.7%	83.0%	2.1%	5.3%	0.4%	100.0%	4.2%	1

TBI = Traumatic Brain Injury

- Of the 24 bicycle related hospitalizations per year in SHR, roughly 5 per year (22.6%) were for all head and neck injuries. Of these, roughly 4 were Traumatic Brain Injuries (TBI; Table 3) and it is unknown what proportion of these involved helmet non-use
- In Saskatoon, of the 22 bicycle-related hospitalizations per year, roughly 5 (22.5%) were head and neck injuries. Roughly 4 per year were TBI's and it is unknown what proportion of these involved helmet non-use (data not shown)

- Most playground injuries are to the upper extremities (very few head and neck), suggesting that children are more susceptible to head injuries when transporting either by motor vehicle, walking or bicycling than when using playground equipment.

Table 4: Saskatoon Exposure-Based Traumatic Brain Injury Rate, 2013

Saskatoon	Percent of all trips	Annual number of trips	Annual number of trips by mode	Average trip distance (km)	Annual distance travelled	Annual TBI hospitalization Saskatoon	Hospitalization TBI per 100 million km
Motor Vehicle	82	288,602,000	236,653,640	5.75	1,360,758,430	13	1.0
Pedestrians	4	288,602,000	11,544,080	1.5	17,316,120	4	23.1
Bicyclists	4	288,602,000	11,544,080	3.4	39,249,872	4	10.2

- For the City of Saskatoon, exposure-based TBI hospitalization rates for MVC were the lowest (1.0), bicycling followed (10.2) and pedestrian rates were the highest (23.1; Table 4).
- Bicycling has a TBI hospitalization risk rate 10X higher than for MVC; walking has 2.3X higher hospitalization risk rate than bicycling; and walking has 23X higher risk rate than MVC.

Table 5: Summary of data

Data not previously shared above but included if any provincial context is needed (note: not exposure-based rates)

	SHR Hospitalization Number Average per year	SHR Hospitalization Rate Average per year (as per population denominator)	SHR TBI contribution from head and neck %	Potential number of TBI per year	Sask. Injury & Trauma ED & Hospitalizations 2015/16	Sask. Transport Death Numbers (2005-2009)
Pedestrians	29	9.5	17.9	5	117	340
Bicycle	24	7.8	18.5	4	96	54
MC	121	39.1	19.4	23	691	1939
Playground	26	8.3	4.2	1	---	---

Saskatoon	Percent of all trips	Annual number of trips	Annual number of trips by mode	Average trip distance (km)	Annual distance travelled	Annual hospitalization Saskatoon	Hospitalization per 100 million km Saskatoon	Annual TBI hospitalization Saskatoon	Hospitalization TBI per 100 million km Saskatoon
MVC	82	288,602,000	236,653,640	5.75	1,360,758,430	67	4.9	13	1.0
Pedestrians	4	288,602,000	11,544,080	1.5	17,316,120	22	127.0	4	23.1
Bicyclists	4	288,602,000	11,544,080	3.4	39,249,872	22	56.1	4	10.2

- In SHR, playground injuries have a similar (but slightly higher) number of hospitalizations and rate of hospitalizations but less Traumatic Brain Injury (TBI) contribution compared to those of bicycling.
- In Saskatoon, pedestrian injuries have a higher number of hospitalizations and rate of hospitalizations and similar (but slightly lower) TBI contributions compared to those of bicycling. Compared to bicyclists and motor vehicle drivers, pedestrians have the highest exposure-based injury hospitalization and TBI risk rate.
- In Saskatoon, motor vehicle collision injuries have higher number of hospitalizations, rate of hospitalizations (based on denominator as population) and TBI contributions compared to those of bicycling. If exposure based comparisons are used, MVC's have the lowest injury hospitalization and TBI risk rates.
- Summary of data specifically re cycling injury:
 - Local data is not indicating that cycling-related injuries are the highest concern;
 - The pedestrian-related is the highest in both exposure-based rates for hospitalization and TBI injury (127.0 and 23.1 per 100 million km respectively)
 - Walking has a 2.3X higher injury hospitalization and TBI risk rate than cycling
 - Walking, compared to motor vehicles, has a 26X higher injury hospitalization risk rate and a 23X TBI risk rate
 - If looking at absolute hospitalization numbers (as many earlier studies have done), bicycling-related hospitalization number are the lowest
 - A helmet bylaw could potentially avoid 4 bicycling-related traumatic brain injuries a year. As we did not conduct a chart review, it is unknown whether TBI hospitalizations involved helmet use or not; that is, it is possible some head injury hospitalizations occurred in spite of helmet use.

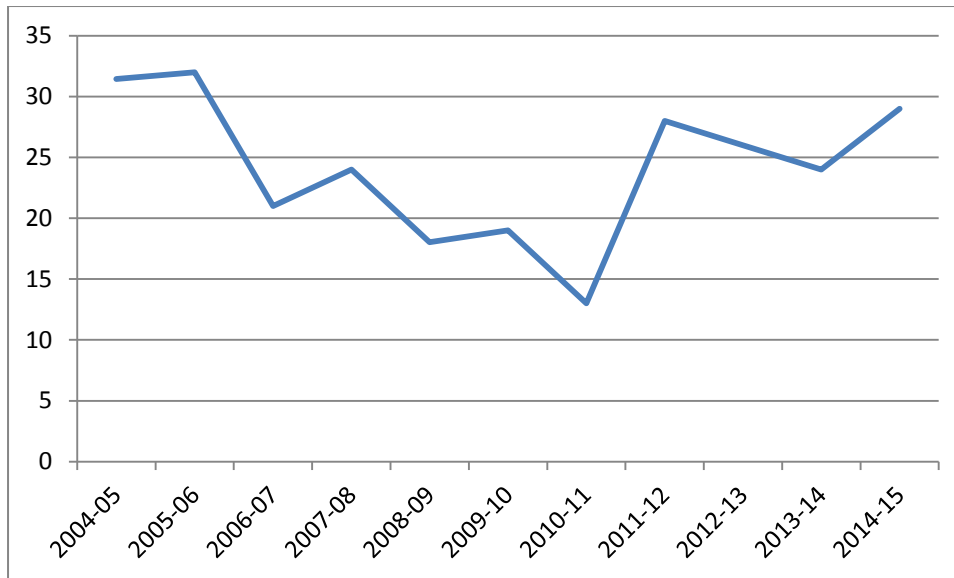
Policy Analysis Dimensions

Dimension 1: Effectiveness

i.e., what effects does the policy have on the targeted health problem

- Public Health Ontario compiled a [knowledge synthesis](#) (2015) regarding mandatory helmet legislation in Ontario and we analyzed that report in addition to further research
 - Prior to Ontario legislation (1995), helmet use was increasing (1990-94)
 - In Ontario, cycling deaths and injury had the lowest rates; death based on cycling exposure is comparable to other modes
 - 11% reduction of deaths per hour of cycling post legislation
 - 55% reduction of deaths per hour of walking post-(helmet) legislation
 - Something other than helmet legislation is happening to account for reductions in injury and death
 - Legislation in effect since 1995 and a rise in helmet use occurred
 - However trends prior to legislation were not accounted for therefore it is hard to discern the exact impact of the legislation
 - In an independent study ([MacPherson, 2006](#)) found that bicycle helmet use in their study population (East York, Ontario 5-19 year olds) increased from pre-legislation level of 45% to 68% in 1997 (Ontario legislation enacted in 1995), then decreased to 46% by 2001
 - There is something conflicting results for cycling behavior post legislation noted in the knowledge synthesis
 - Currently in Ontario, 1/3 report never wearing a helmet ([Statistics Canada, June 2018](#))

- “Bike helmet legislation places the onus of responsibility for protection from injury and death on the vulnerable road user, who must choose between complying with the laws vs not riding”
- Trends have shown that rate of bicycling-related head injury and injury overall have been declining in Canada ([Dennis, 2013](#), [Middaugh 2010](#), [Teschke, 2015](#))
 - SHR data has shown a declining trend for hospitalizations for bicycling injuries in 2004-10 and again in 2012-14



- The research findings regarding the impact of helmet legislation is inconsistent. The issue has been researched over the past two to three decades and evidence has been found both for and against the impact of legislation
 - **In regards to the “pro” legislation research:**
 - There have been criticism with a number of studies that are included in the systematic reviews based on flawed methodological issues, not looking at the independent effect of legislation and conclusions reached by researchers based on the data and/or not explaining/including data that did not support their conclusions
 - Examples:
 - None of the studies used an exposure-based denominator to assess risk estimate (however they concluded they were assessing risk). The first study to do this was done by [Teschke](#) (2013)
 - Trends of declining injury and death prior to legislation are not accounted or acknowledged in the conclusions; a decline in injury and death are wholly attributed to effect of legislation without acknowledging or controlling for other con-current happenings that could be contributing to the decline
 - Few studies include a breakdown by areas of environmental risk (e.g., cycling infrastructure, traffic volume, road type)
 - Research studies such as [Dennis, 2013](#) and [Teschke, 2015](#) have been argued to have superior methodology and controlled for background trends, modeling head injuries as a proportion of all cycling injuries, and calculating exposure-based risk rates compared to case-controlled studies or other ecological studies done in the past ([Goldacre, 2013](#))
 - **In regards to the ‘limited or no independent effect’ research:**

- In an analysis of helmet legislation and hospital admissions for cycling related head injuries in Canadian provinces and territories, it was found that after taking baseline trends of declining head injuries into account, no independent effect of helmet legislation is seen ([Dennis, 2013](#))
- In another Canadian study that examined cross-province comparison (with and without helmet legislation), exposure-based injury rates and mode share over 2006-2011 (a period of stable helmet legislation) were investigated ([Teschke, 2015](#))
 - Hospitalization rates were lower with higher bike share modes regardless of helmet legislation. For traffic-related injury causes, cycling mode share was the only explanatory variable. It was negatively associated with hospitalization rate, significantly so for injuries to any body region (in simple and multiple regression) and to the brain, head, scalp, skull or face (in simple regression)
 - Helmet legislation not associated with decreasing hospitalization rates for brain, scalp, skull, face or head injuries indicating that factors other than legislation have more influence on injury rates
- Based on the mathematical model created to determine net societal health benefit of helmet legislation, it was determined that in jurisdictions where cycling is relatively unsafe, helmets will do little to make it safer, and a helmet law, under extreme assumptions, may make a small positive contribution to net societal health ([De Jong, 2012](#))

Conclusion summary:

- Helmets are a piece of personal protective equipment and have the potential to reduce the risk of head injury if the individual has resources to purchase a helmet, wears it when cycling, the helmet fits appropriately, wear and tear on helmet is minimal and the collision happens at fairly low speeds ([Thompson, 2000](#)). However:
 - Helmets do not protect/prevent non-head and neck injury
 - SHR data shows 77% of hospitalizations related to bicycling injuries are non-head or neck related
 - Helmets do not prevent the collision or injury-cause from happening in the first place
 - Helmets do not address or mitigate the root causes around the collision and injury (e.g., lack of safe cycling infrastructure such as protected bike lanes)
 - Helmet legislation does not create a safe systems approach that provides universal injury (head and body) reduction potential to the whole population. It is an individual-level intervention of a piece of personal protective equipment and places the onus of responsibility on the user, not on the system

Conclusion: effectiveness = (Josh +; Cora neutral/+; Mel neutral) = Overall rating +

Dimension 2: Unintended Effects

i.e., what are the unintended effects of this policy

- Creating barriers to people cycling that do not own or operate (by choice, ability or cannot afford) a car to access employment, education, food, healthcare services and more
- A potential risk or compromise for creating safe infrastructure for active modes
- Research has highlighted a variety of concerns regarding unintended effects; however the evidence on the occurrence of these is mixed ([Marshall, 1994](#); [De Jong, 2012](#); [Teschke, 2015](#); [Public Health Ontario Knowledge Synthesis, 2015](#))

1. Disincentive effect where people choose not to cycle because of mandatory helmet use therefore impacting the cycling mode share. This may be due to the small burden of having and wearing a helmet as well as the disproportionate attention it draws among environmental risk factors associated with cycling
2. Increased perception of cycling as an unsafe mode of transportation; therefore a reduced cycling mode share (and loss of protection of safety in numbers)
3. If a decrease (or a non-increase) in cycling mode share happens, this hypothetically translates into less physical activity for the population. This results in a coinciding increased risk of chronic diseases such as diabetes, heart disease, cancers and mental health issues which increase the burden on the healthcare system and costs to society and decrease quality of life
4. Motorists take greater risks when driving near cyclists wearing helmets
5. Risk compensation of people cycling when wearing helmets (i.e. take more and greater risks)

Conclusion: unintended effects = (Josh --; Cora --; Mel --) Overall rating = --

Dimension 3: Equity

i.e., what are the effects of this policy on different groups?

- Effect of legislation has been shown to vary by income. In Ontario, two independent studies ([MacPherson, 2006](#); [Parkin, 2003](#)) looked at the impact on children 5-19yrs ([MacPherson, 2006](#)) and 5-14yrs ([Parkin, 2003](#)) and found:
 - High income area children most likely to be helmeted pre-legislation (73% high, 50% mid, 33% low income area) ([MacPherson, 2006](#))
 - Legislation had little effect (rate of change) on increasing helmet use in high-income area children ([Parkin, 2003](#))
 - Lowest income area children had lowest helmet use pre- and post- legislation in Ontario ([Parkin, 2003](#); [MacPherson, 2006](#))
 - Any increase in helmet use in mid- and low- income area children at start of helmet legislation was not sustained 2yrs, 4yrs and 6yrs post-legislation. At 4yr and 6yr marks, mid- and low-income area children's helmet use was back to pre-legislation rates
 - Helmet use in high-income area children was consistently the highest. Helmet use increased with legislation (73.1% pre-legislation to 89.3% in 1997). Levels were sustained post-legislation as of 2001 ([MacPherson, 2006](#)).

Income area	1995 Pre-legislation		1996, 1 year post-legislation		1997, 2 years post-legislation		1999, 4 years post-legislation		2001, 6 years post-legislation	
	% use	RL (95% CI)	% use	RL (95% CI)	% use	RL (95% CI)	% use	RL (95% CI)	% use	RL (95% CI)
High	73.1	2.2 (1.9 to 2.5)	77.7	1.2 (1.1 to 1.3)	89.3	1.6 (1.5 to 1.8)	80.9	2.6 (2.2 to 3.0)	84.5	2.6 (2.2 to 3.0)
Mid	50.0	1.5 (1.2 to 1.7)	78.4	1.2 (1.1 to 1.3)	59.9	1.1 (0.9 to 1.2)	53.9	1.8 (1.5 to 2.1)	50.4	1.5 (1.2 to 1.9)
Low	33.0	reference	61.4	reference	55.6	reference	30.8	reference	33.0	reference

CI, confidence interval; RL, relative likelihood.

- In the United States studies examined equity impacts in California ([Sullins, 2014](#); [Kraemer, 2016](#); [Castle, 2012](#)), Illinois ([Williams, 2018](#)) and Florida ([Kraemer, 2016](#)) and using the National Trauma Data Bank ([Gulack, 2015](#))

- Sub-populations of minority racial groups (African-American, Hispanic, Asian) less likely to wear helmets and helmet legislation was identified as less effective for these sub-populations ([Sullins, 2014](#), [Kraemer, 2016](#); [Williams, 2018](#); [Castle, 2012](#); [Gulack, 2015](#))
- Less helmet use with patients hospitalized for cycling injury that were on Medicaid (a proxy for low SES measure of families) ([Sullins, 2014](#), [Gulack, 2015](#))
- Helmet laws increase disparities between the white students and other minority ethnic students and these disparities generally persist for a follow-up time of at least a decade ([Kraemer, 2016](#))

Conclusion summary:

- Helmet legislation
 - Creates another barrier for people living in poverty to get around their community to access employment, education, food, healthcare services and /or social opportunities
 - Creates another barrier without addressing the cause of bicycling injuries for these individuals and the population overall

Conclusion: equity = (Josh --; Cora ---; Mel --) Overall rating = --

Dimension 4: Cost

i.e., what is the financial cost of this policy?

A cost estimate was beyond our purview; however the cost categories that were identified include:

- Resources (fiscal and human)
 - For city administration to do an investigative study for their purposes, prepare a report and build a case to convince Council;
 - To craft bylaw;
 - To hold public hearings
 - To address any resistance in the community
 - Implementation of bylaw
 - Program costs to administer free helmets to people who live in low-income circumstances to address health inequity impacts of bylaw
 - Other program or costs to mitigate other negative unintended effects
- * Unless there is additional staff and budget resources, this will take away from implementing the Active Transportation Plan and infrastructure projects for creating safe all ages and abilities cycling infrastructure and network
- Police enforcement of the bylaw
- Cost to people living in poverty – punitive to those that cannot afford to purchase a helmet
- Healthcare costs associated with chronic disease
- Using the SHR and Saskatoon local data potentially 4 TBI per year would be avoided with a bicycle helmet bylaw
- Some cost-recovery from the tickets issued and paid for not wearing a helmet

Conclusion: cost = (Josh --; Cora --; Mel --) Overall rating = --

Dimension 5: Feasibility

i.e., is this policy technically feasible?

- Feasible pending availability of resources, as outlined under Dimension 4
- There are no technological limitations and there are learnings from other jurisdictions.
- There is a question regarding the feasibility of ticketing a child or youth. If police cannot, or there is no incentive to pay, then a mandatory helmet bylaw becomes moot
 - There was some conversation regarding the similarity with seatbelt tickets for youth under 16 years and that the parents have to pay however, that is written into the Traffic Act whereas bicycle helmet use is not
- A policy window in the municipal processes to develop and implement a bylaw with the Bicycle Bylaw update process

Conclusion: feasibility = (Josh +; Cora +; Mel +) Overall rating = +

Dimension 6: Acceptability

i.e., do the relevant stakeholders view the policy as acceptable?

Below is based upon practitioners perspectives through knowledge of area and conversations with contacts

City/Municipal Stakeholders:

- Council unanimously opposed a helmet bylaw a few years ago
- Possibly contrary to concept and principles of Vision Zero
 - Risk of bylaw disproportionately placing the responsibility of safety on the individual users for personal protective equipment rather than addressing a safe systems approach and a universal intervention that benefits the whole population
 - Societal practices and expectations often default to education and individual responsibility; however Vision Zero offers a chance for a paradigm shift with identifying it is a shared responsibility (the individual level as well as the systems level) with a renewed commitment to deepen the system level approaches
- Staffing focus, the funding and implementation of projects – this can impact the implementation the Active Transportation Plan and creating a safe, all ages and abilities cycling network (high priority); staff time, funding and timelines would need to be compromised
 - Population and Public Health in Saskatoon has a long history of advocating for the City to create an Active Transportation Plan, participated in the process to create, and continues to advocate for its implementation. If the work of creating a mandatory helmet bylaw puts that in jeopardy, that would be undesirable.
 - The protective effect of a safer transportation system and road environment is always present regardless of a person's choice to don personal protective equipment, their age, ability, gender, ethnicity or income level ([Lavoie, 2014](#))
- The City has committed to increasing the cycling mode share in the city and has set targets to double the cycling mode share by 2045 for all trips and for commuting trips

- A helmet bylaw has the potential to negatively impact the City's progress on achieving these targets (by potentially negatively impacting bike mode share and disproportionately highlighting cycling as a 'risky' mode of transportation)
- The targets and achieving the targets, are indicated for the City's strategic goals of moving around, quality of life in addition to their climate action plan and the sustainability of the transportation system

People living in poverty/living in low-income areas:

- A helmet bylaw/legislation does not allow the inequities and unintended effects to be mitigated and avoided and can increase the barriers for people who do not have a car, to live their daily lives and engage in community

Cycling Advocacy Groups:

- Saskatoon Cycles is opposed to a helmet bylaw or legislation and feel the critical focus needs to be on the infrastructure and creating a safe environment for people of all ages and abilities to use cycling as a mode of transportation rather than placing the onus of safety at the level of the individual
- Cycling is not a dangerous activity in and of itself, the environment is dangerous if the right infrastructure is not in place

Provincial Government:

- Saskatchewan and Quebec are the only provinces that do not have any bicycle helmet legislation([Fridman, 2018](#)). Some of the provinces have for all ages (British Columbia, Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and Labrador), while for others the legislation is age-restricted to children and youth (Alberta, Manitoba, Ontario)
- There is nothing in the Saskatchewan Traffic Act and the provincial government has deferred responsibility and action to the municipalities rather than take a provincial approach

Saskatchewan Urban Municipality Association (SUMA)

- A SUMA resolution passed in 2015 with just over 50% of votes to lobby the provincial government to create provincial legislation. The communities of Moose Jaw, Estevan and Yorkton have recently adopted bicycle helmet bylaws for those 16 years and under

Saskatchewan Medical Association (SMA)

- SMA advocates for helmet legislation and has a position paper on it as does the Canadian Pediatric Society
- In the literature, it is not uncommon for medical doctors who work in the acute care settings to have similar stances as they are dealing with the individual cases

Conclusion: acceptability = (Josh +; Cora --, Mel -) Overall rating = -

Presentation using scoring

Effectiveness	Unintended Effects	Equity	Cost	Feasibility	Acceptability
+	--	--	--	+	-

Overall Summary:

The protective effect of a safer transportation system and road environment is always present regardless of a person's choice to don personal protective equipment, their age, ability, gender, ethnicity or income level ([Lavoie, 2014](#)).

Bicycling as a mode of transportation is often disproportionately singled out as the riskiest mode of transportation. The best available approach to calculating risk is an exposure-based risk and the bulk of the research evidence in regards to helmet legislation did not include this calculation and analysis. When examining the risk of various modes (i.e. not looking at bicycling in isolation), the local data is not indicating that bicycling and bicycling-related injuries are the highest concern.

Being using a robust policy analysis framework, and looking at the analysis overall, a helmet bylaw or legislation is not indicated based on the dimensions of unintended effects, equity, cost and acceptability being unfavourably impacted.

Potentially eliminating 4 cycling-related TBIs per year is a less than favourable public policy option when comprehensively examining the cost, unintended effects (e.g. decreasing bike mode share), potential compromise to creating safe infrastructure for active modes (e.g., implementation of Active Transportation Plan is delayed or pace is slowed due to conflicting priorities) and the potential for increasing health inequities (e.g., punitive cost to people who cannot afford a helmet). Please note: it is not being argued that potentially 4 cycling-related TBIs per year is okay; but rather it is being recognized that if zero TBIs is the target, then this target needs to be applied to TBI attributed to walking and motor vehicles as well. Addressing the transportation system as a whole will provide more universal protection (for injury overall and TBI) to all road users.

Proposed PPH Recommendation:

Based on:

- inconsistent (and/or tenuous because of methodological flaws of earlier research) evidence of helmet legislation having a strong impact at a population level;
- the local data in terms of bicycling injury hospitalization data (numbers, rate, exposure-based risk rate, TBI contribution) is not indicating that bicycling-related injuries are the highest concern;
- the overall policy analysis of a helmet bylaw (in terms of effectiveness, unintended effects, equity, cost, feasibility and acceptability), which illuminated risks and drawbacks that could negatively impact health equity, health outcomes and progress on creating safe environments for all modes of transportation;

it is the recommendation of Population and Public Health, Saskatoon that:

1. the recommendation of the Chief Medical Health Officer in the Saskatoon Health Region Unintentional Injury Report (2016) remain unchanged "Encourage the use of bicycle helmets within Saskatoon";
2. the City of Saskatoon does not proceed with a bicycle helmet bylaw.

September 14, 2018

City Hall
222 - 3rd Avenue North
Saskatoon SK S7K 0J5

To the City of Saskatoon Administration:

Recommendation to include the mandatory use of bicycle helmets (Canadian Standards Association-approved) for cyclists of all ages in the update to Bylaw 6884

The benefits of cycling are well-known, and include positive effects on health and the environment. Unfortunately, cycling does not come without risks. Head injuries are a particularly serious outcome of cycling-related incidents, with the potential for death or long-term disability. In Saskatchewan between 2004 and 2013, there were 133 traumatic brain injuries in children and youth under the age of 20 due to cycling-related incidents, accounting for 25% of all cycling-related hospitalizations in this population. The risk of brain and head injury, however, can be mitigated through the use of helmets. Strong research evidence shows that bicycle helmets provide significant protection against traumatic brain, head, and upper facial injuries.

Based on available research, all-ages helmet legislation is an effective and protective strategy for the health and safety of cyclists with little to no evidence supporting common arguments against this legislation. Several professional organizations have called for mandatory bicycle helmet legislation for cyclists of all ages in an effort to prevent serious injuries, including the Canadian Pediatric Society, the Canadian Association of Emergency Physicians, and the Canadian Academy of Sport and Exercise Medicine. Although the Province of Saskatchewan has not yet enacted provincial helmet legislation, several municipalities have enacted legislation, including Moose Jaw, Estevan, and Yorkton. The Saskatchewan Prevention Institute encourages the City of Saskatoon to join these municipalities and include the mandatory use of Canadian Standards Association-approved bicycle helmets for cyclists of all ages in the update to Bylaw 6884.

Despite the proven protective effect of helmets, many cyclists still do not wear them. Research indicates that mandatory bicycle helmet legislation increases helmet use. Systematic reviews have shown that these increases in helmet use are sustained, particularly when they are combined with enforcement and education. The largest increases in helmet use tend to occur in places where legislation applies to all ages, rather than legislation targeted solely at children. Riders of all ages are at risk for head injury and are, therefore, protected by the use of helmets. Children are also much more likely to use helmets in the presence of adults wearing helmets. In addition to increases in helmet use, mandatory bicycle helmet legislation has been found to be associated with decreases in serious head injuries and cycling-related fatalities.

Potential unintended consequences are sometimes used as an argument against helmet legislation, including reduced cycling rates and greater risk-taking behaviours among cyclists. In their review of the literature, the Canadian Pediatric Society states that evidence for these unintended consequences of helmet legislation is weak and conflicting. The majority of existing research indicates that legislation is not associated with long-term reductions in cycling. It is difficult to measure whether people wearing helmets will be more likely to engage in risky cycling behaviours, but a review of the literature suggests that there is no direct evidence to support this argument. In fact, research among adults has shown that those who wear helmets are more likely to engage in precautionary behaviours.

Another argument that has been put forward against helmet legislation is that it may unfairly burden those living in poverty, both due to the cost of helmets and potential fines for those who do not wear a helmet. However, research from Alberta and Ontario suggests that helmet use increases by approximately the same amount in higher and lower-income neighbourhoods, and may even increase more in lower-income neighbourhoods where the baseline rates of helmet use are often lower. It is important to note that helmets are not overly expensive, particularly when compared to other mandated safety equipment like car seats and even booster seats. Subsidy and community programs are possibilities for helping families obtain helmets and can be combined with enforcement and education.

Legislation on safety issues serves an important purpose – to help parents and caregivers identify and adhere to best practice safety guidelines. Research has shown that once a safety initiative is legislated, parents believe that initiative is important to follow and easier to act on. The outcomes from booster seat legislation are highlighted as evidence of this effect, and researchers suggest that the same outcomes may be found for helmet legislation.

The Saskatchewan Prevention Institute's recommendation to include mandatory helmet use in the updated bicycle bylaw aligns with recommendations from the Saskatchewan Medical Association, the Canadian Pediatric Society, Parachute Canada, and the principles of Vision Zero. It is important that helmet legislation is accompanied by education and enforcement, in order to achieve optimal results in terms of long-term helmet use. By enacting mandatory helmet use, Saskatoon has the opportunity to be a leader in injury prevention in Saskatchewan.

Sincerely,



Joelle Schaefer
Executive Director

Supporting documents attached:

- *Bicycle Helmets: A Review of the Literature on Helmet Effectiveness and Impacts of Mandatory Helmet Legislation* (Saskatchewan Prevention Institute, 2018)
- *Bicycle Helmet Use in Canada: The Need for Legislation to Reduce the Risk of Head Injury* (Position Statement by the Canadian Paediatric Society, 2013)
- *Facts and Myths About Helmet Legislation* (Parachute, 2014)
- Cycling, Traffic and Non-Traffic (Chapter from the Report *Child and Youth Injury in Saskatchewan 2004-2013*; Saskatchewan Prevention Institute, 2017)

Bicycle Helmets:

A Review of the Literature on Helmet Effectiveness and Impacts of Mandatory Legislation

Jody Shynkaruk

9/13/2018

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Bicycle Helmets: A Review of the Literature on Helmet Effectiveness and Impacts of Mandatory Helmet Legislation

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Background

The benefits of cycling are well-known, and include positive effects on health and the environment. Encouraging physical activity in children is particularly important given the percentage of Canadian children who are overweight or obese. In 2015, 17.1% of Canadian children aged 5 to 18 years were overweight and 13.0% were obese (Statistics Canada, 2016). Although there are benefits to bicycling, it does not come without risks. In Saskatchewan, between 2004 and 2013, 539 children were hospitalized due to cycling-related injuries, representing 3.3% of all injury-related hospitalizations in children and youth in this time period (Saskatchewan Prevention Institute, 2017). Of these injuries, 86.1% were non-traffic and included falling off of a bicycle or striking a stationary object. The remaining 13.9% of cycling-related hospitalizations were due to children being struck by a motor vehicle.

Head injuries are a particularly serious outcome of cycling-related incidents, with the potential for death or long-term disability (Hagel & Yanchar, 2013). In Saskatchewan, between 2004 and 2013, head and neck injuries were responsible for 27.4% of the cycling-related hospitalizations in children and youth (Saskatchewan Prevention Institute, 2017). Of these, 86.9% were classified as traumatic brain injuries (e.g., concussions and internal head injuries). Not wearing a bicycle helmet has been identified as a significant risk factor for severe injury in cycling incidents (Hagel, Romanow, Enns, Williamson, & Rowe, 2015). In an effort to prevent these potentially serious injuries, several professional organizations have called for mandatory bicycle helmet legislation (e.g., the Canadian Pediatric Society, the Canadian Association of Emergency Physicians, and the Canadian Academy of Sport and Exercise Medicine).

Effectiveness of Helmets

There is extensive literature focused on the effectiveness of bicycle helmets for reducing the risk of severe head injuries, with many others highlighting the additional protective effect of helmets for reducing facial injuries. In their updated position statement, which is based on scientific studies and systematic reviews of existing evidence, the Canadian Academy of Sport and Exercise Medicine (CASEM) states that the protective value of helmets for bicycling is recognized (Goudie & Page, 2013). More specifically, they state that the existing evidence shows that helmet use in cyclists significantly decreases head and facial injury. Although the risk reduction estimates reported in meta-analyses and systematic reviews differ, their results all point to significant reductions in injury risk when cyclists wear helmets.

For example, a meta-analysis of 16 articles found that helmets were effective for reducing head injuries (conservative risk reduction estimates of at least 45%), brain injuries (conservative risk reduction estimates of at least 33%), facial injuries (conservative risk reduction estimates of at least 27%), and fatal injuries (conservative risk reduction estimates of at least 29%) (Attewell, Glase, & McFadden,

2001). A 2001 Cochrane systematic review reported that helmets reduce the risk of head injury by up to 88% and reduce the risk of upper and mid-facial injury by up to 65% for cyclists of all ages (Thompson, Rivara, & Thompson, 2001). Importantly, this review also showed that helmets provide equal levels of protection for crashes involving motor vehicles (69%) and crashes from all other causes (68%). Research from Australia indicated that helmet use was associated with a reduced risk of head injury in bicycle collisions with motor vehicles of up to 74% (Bambach, Mitchell, Grzebieta, & Olivier, 2013). This reduced risk was particularly true for more serious head injuries, including skull fractures, intracranial injuries, and concussive injuries. Olofsson, Bunketorp, and Andersson (2017) also found that the protectiveness of helmets against skull, brain, and facial injuries increases with the severity of the injury examined. Although the proportion of children with injuries did not decrease in their study, those wearing helmets were much less likely to experience serious or more severe skull and brain injuries and moderate or more severe facial injuries than those not wearing a helmet.

A re-analysis of Attewell et al.'s (2001) data, with the inclusion of newer research, confirmed the protective effect of helmets for reducing head and facial injuries (Elvik, 2011). The risk reduction estimates reported by Elvik were smaller but were still significant. Elvik suggested that earlier research tends to show stronger protective effects for helmets, perhaps due to the fact that different types of helmets do not provide the same protective effect. For example, hard shell helmets have been found to offer better protection against head and facial injury than soft shell helmets, which have become more popular over time. Even soft shell helmets have been found to provide substantial protection for cyclists of all ages however, particularly when compared to not wearing a helmet (Thompson et al., 2001).

More recent research has confirmed the effectiveness of helmets for reducing the severity of cycling-related injuries in the event of a crash, particularly brain injuries (Davison et al., 2013; Hollingworth, Harper, & Hamer, 2015; Kaplan, Vavatsoulas, & Prato, 2014), but also skull fractures and facial injuries (Michael, Davenport, & Draus, 2017). Biomechanical research, using a validated anthropomorphic test head-form and a range of drop heights, indicated that contemporary bicycle helmets are highly effective at reducing head injury metrics and the risk for severe brain injury in head impacts (Cripton, Dressler, Stuart, Dennison, & Richards, 2014). Another laboratory study concluded that helmets are an important preventive tool for reducing traumatic brain injury in children, including injury due to impact and/or compressive forces (Mattei et al., 2012). Joseph et al. (2017) found that helmeted cyclists had 51% reduced odds of severe traumatic brain injury, 44% reduced odds of mortality, 31% reduced odds of orbital fractures, and 27% reduced risk of facial contusions and lacerations. Persaud, Coleman, Zwolakowski, Lauwers, and Cass (2012) also identified reductions in head injury-related mortality associated with helmet use. Sethi et al. (2015) found that the protective effect for bicycle helmets against traumatic brain injury remained even after accounting for road safety measures in New York City (e.g., infrastructure improvements, bicycle share programs, enacting an action plan to reduce traffic deaths and serious injuries). These authors found that helmeted cyclists were 72% less likely to sustain a traumatic brain injury. Echoing the sentiments of many of the authors cited above, Michael et al. (2017)

concluded that “the consistent use of a properly fitting bicycle helmet is the single most effective safety measure to prevent head injury in the event of a bicycle accident” (p. 1009).

Calls for Mandatory Helmet Legislation

After reviewing the available evidence on the positive effects of helmet use, several Canadian associations have released policy statements calling for legislation around mandatory helmet use. For example, the Canadian Pediatric Society (CPS) recommends that all jurisdictions in Canada legislate and enforce bicycle helmet use for all ages (Hagel & Yanchar, 2013). In making this recommendation, the CPS states that there is evidence that such legislation increases helmet use and reduces the risk of head injuries. The CPS continues to advocate for the mandatory use of Canadian Standards Association-approved bicycle helmets for riders of all ages (CPS, 2016). They state that legislation must be accompanied by enforcement and education programs in order to be effective in the long-term.

Likewise, the Canadian Association of Emergency Physicians (CAEP) states that bicycle helmet legislation should be approved in provinces without any current law as soon as possible, and that existing legislation should be amended to make helmets mandatory for cyclists of all ages (Letovsky, Rowe, Friedman, Snider, & Sullivan, 2014). CAEP suggests that helmet use mitigates the severity and frequency of cycling injuries, including severe head injuries and death. Their review of the literature suggests that a ceiling effect may have been reached in helmet wearing, meaning that legislation is needed in order to increase rates of helmet wearing. The Canadian Academy of Sport and Exercise Medicine (CASEM) also advocates for comprehensive legislation mandating helmet use for bicyclists of all ages (Goudie & Page, 2013).

Effects of Mandatory Bicycle Helmet Legislation

Several reviews of the existing literature indicate that mandatory bicycle helmet legislation increases helmet use and decreases head injury. For example, a Cochrane review in 2008 showed that helmet use increased following the introduction of legislation (Macpherson & Spinks, 2008). Importantly, this review also showed that these increases in helmet use were associated with decreased injury rates and no decrease in bicycle ridership. A more recent study examining the effects of legislation on helmet use and ridership in Canada revealed similar findings (i.e., increased helmet use, decreased injury rate, no decrease in ridership) (Dennis, Potter, Ramsay, & Zarychanski, 2010). Another review of the existing literature suggests that while the effect size varies, the weight of the evidence shows that helmet legislation both increases helmet use and decreases head injury among children (Dellinger & Kresnow, 2010). This review also examined differences between statewide laws and laws covering smaller areas (e.g., municipal laws) and found that statewide laws were more effective in increasing helmet use (Dellinger & Kresnow, 2010). However, children living in states with only local laws were still more likely to wear bicycle helmets than those in states with no laws.

Another systematic review demonstrated higher proportions of helmet use following legislation (either regional, state/province-wide, or municipal level), although the increase varied across studies (increases

above 30% were reported in the majority of the included studies) (Karkhaneh, Kalenga, Hagel, & Rowe, 2006). The authors indicated that these effects occurred even in the absence of rigorous enforcement. This review also showed that there is a long-term effect of legislation, with sustained increases in helmet use following the introduction of legislation. Huybers et al. (2017) found that helmet use continued to rise in Nova Scotia up to 14 years post-legislation, with ongoing enforcement and educational efforts. Other recent research has found that legislation is associated with increases in helmet use (e.g., Jewett, Beck, Taylor, & Baldwin, 2012; Karkhaneh et al., 2011; Molina-García & Queral, 2016), and that these increases are sustained in the years following legislation (e.g., Karkhaneh et al., 2011; Kraemer, 2016; Olivier, Walter, Grzebiet, 2013). The largest increases in helmet use following legislation tend to occur in jurisdictions with lower baseline helmet use and in jurisdictions where legislation applies to all ages (Dennis et al., 2010; Goudie & Page, 2013; Karkhaneh et al., 2006; Karkhaneh et al., 2011).

Research from Alberta showed significant declines in the proportion of child cyclist-related emergency department head injuries and hospitalizations in the years following legislation (Karkhaneh, Rowe, Saunders, Voaklander, & Hagel, 2013). These authors concluded that their findings are consistent with a bicycle helmet legislation effect. In another Canadian study, Wesson et al. (2008) found significant reductions in cycling-related mortality in children following legislation in Ontario. Similar associations between legislation and reductions in cycling-related mortality have also been identified in the United States (Meehan, Lee, Fischer, & Mannix, 2013). Although the proportion of cyclists admitted to the hospital for head injuries in Seattle did not decrease in the ten-year period following helmet legislation, major head trauma as a proportion of all cycling-related head trauma did decrease significantly compared to the rest of King County which did not have helmet legislation (Kett, Rivara, Gomez, Kirk, & Yantsides, 2016). In other words, although the results of this study did not show an overall decrease in head injuries, it did show a decrease in the severity of head injuries and cycling-related fatalities. These findings led the authors to conclude that legislation was effective in reducing severe disability and death.

Some authors suggest that decreasing trends in head injuries in jurisdictions with helmet legislation may be due to reductions in cycling. Macpherson and Spinks (2008) suggest that comparisons between the proportion of head injuries compared with other cycling-related injuries pre- and post-legislation show significant declines in the proportion of head injuries compared to other injuries. Similarly, Joseph et al. (2017) limited their study inclusion criteria to include only patients with an intracranial bleed, giving them the ability to conclude that the observed reduction in severity of head injury was associated with helmet use rather than other factors. Macpherson et al. (2002) compared cycling-related head injuries and other cycling-related injuries in Canadian provinces with and without helmet legislation. They found that the legislation was associated with reductions in head injuries but not other cycling-related injuries, again indicating a significant effect of helmet legislation on cycling-related head injuries. Lee, Schofer, and Koppelman (2005) found similar outcomes in California when head injuries were compared to other cycling-related injuries. Olivier et al. (2013) found an increase in cycling-related arm injuries, similar to reported increases in cycling, but a reduction in cycling-related head injuries over a 10-year period

following legislation in Australia. Taken together, these studies suggest that the reported reductions in injury are due to increased helmet use following legislation, rather than a reduction in cycling.

Meehan et al. (2013) suggest that legislation can serve another purpose, in addition to increasing helmet use and decreasing injury. These authors suggest that legislation helps parents identify and adhere to best practice safety guidelines. In other words, once a safety initiative is legislated, parents believe that initiative is important to follow and easier to act on. These authors report outcomes related to booster seat legislation as evidence of this effect, and suggest that the same outcomes may be found for bicycle helmet legislation. Past surveys of Canadian parents indicated that parents are highly supportive of helmet legislation and that they believe bicycle helmets are effective for reducing injury (Parkin, Degroot, Macpherson, Fusello, & Macarthur, 2014).

Current State of Legislation in Canada

Despite calls for mandatory bicycle helmet legislation across Canada, and despite research indicating that legislation is effective at increasing helmet use and reducing injury, several provinces and territories do not have mandatory bicycle helmet legislation.¹ In addition to the three territories, two provinces do not currently have provincial legislation related to bicycle helmets, including Saskatchewan. It is for this reason that Saskatchewan is ranked “poor” in the 2016 CPS Status Report section on bicycle helmet legislation (see <http://www.cps.ca/en/status-report/bicycle-helmet-legislation> for more information). The CPS acknowledges that education programs are available in Saskatchewan, but the CPS continues to recommend that Saskatchewan enact legislation that requires all age groups to wear helmets. Five Canadian provinces currently have all-ages legislation, and another three provinces have bicycle helmet legislation for those under the age of 18 years.

Common Arguments against Mandatory Legislation

In their review of the literature, the CPS states that evidence for unintended consequences of helmet legislation (i.e., reduced cycling and greater risk-taking) is weak and conflicting (Hagel & Yanchar, 2013). The issue of reductions in cycling following mandatory helmet legislation has been investigated by a number of researchers. The majority of the findings suggest that legislation is not associated with long-term reductions in cycling. For example, in their review of data related to cycling in Nova Scotia post-helmet legislation, Huybers et al. (2017) indicated that helmet legislation was not associated with changes in the number of cyclists. Other researchers have also reported that legislation is not associated with a reduction in cycling (e.g., Dennis et al., 2010; Jewett et al., 2012; Karkhaneh et al., 2006; Leblanc, Beattie, & Culligan, 2002; Macpherson & Parkin, 2001; Macpherson & Spinks, 2008; Molina-García & Queral, 2016; Wesson et al., 2008).

¹ Refer to Parachute’s (2014) summary chart for more information about the current state of bicycle helmet legislation across Canada (<http://www.parachutecanada.org/downloads/policy/Bike%20Helmet%20Legislation%20Chart-2014.pdf>).

Kraemer (2016) found limited evidence that legislation may slightly reduce cycling (two of the four jurisdictions studied saw a decrease in cycling, while the other two jurisdictions did not). Kraemer stated that any reduction in cycling only matters from a physical health perspective if the health consequences of less activity exceed the injury benefits from helmet uptake. Other authors have also suggested that reduced cycling is only problematic in terms of health if other activities are not taken up in place of cycling (e.g., Hagel & Yancher, 2013). However, the majority of the available literature indicates that reductions in cycling are not common following bicycle helmet legislation. Macpherson et al. (2006) suggest that year-to-year variations in cycling rates are more likely to be associated with other factors like weather or random variations in cycling, rather than legislation. Jewett et al. (2012) state that research concluding that helmet laws result in a decrease in ridership are limited and have not been duplicated.

Another common argument against mandatory helmet legislation is that if children are wearing helmets, they may engage in more risky cycling behaviours because they think they are protected from injury. Although this would be a difficult outcome to measure, research with adults has shown that those who wear helmets are more likely to engage in precautionary behaviours (Ramage-Morin, 2017). In his review of the literature, Elvik (2011) suggests that there is currently no direct evidence for the idea that helmeted cyclists adopt more risky riding behaviours.

Finally, some argue that helmet legislation may unfairly burden those living in poverty, both due to the cost of the helmet and potential fines for those who are not wearing a helmet. Canadian research suggests, however, that helmet use increases following legislation by approximately the same amount in higher and lower-income neighbourhoods, and may even increase more in lower-income neighbourhoods where the baseline rates of helmet use are often lower. For example, Hagel et al. (2006) found that helmet use increased by similar amounts in higher and lower-income neighbourhoods from two years prior to two years after Alberta's helmet legislation came into effect. Karkhaneh et al. (2011) reported similar findings for children under the age of 13 in Alberta. In Toronto, Parkin et al. (Parkin, Khambalia, Kmet, & Macarthur, 2003) found that legislation was associated with greater increases in helmet use in low and middle-income areas than in high-income areas, which had higher rates of helmet use prior to legislation. This is further evidence that legislation helps caregivers identify which safety initiatives are important to follow. In other words, caregivers may be more likely to spend money on a helmet following legislation, even if they have a lower income, because they believe it is important to do so. Bicycle helmets are not overly expensive, particularly when compared to other mandated safety equipment like car seats and booster seats. Subsidy and community programs are also possibilities for helping families obtain helmets.

Summary

There is strong evidence that bicycle helmets are significantly protective against head, brain, and upper facial injuries. There is also strong evidence that legislation increases helmet use and reduces the risk of bicycle-related head injury, particularly severe head injury. The majority of the research indicates that

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rates of cycling do not decline post-legislation. Research related to the possibility of increased risk-taking associated with mandatory helmet use is lacking, and such associations would be difficult to accurately measure. In order for these rates of use to be sustained over the long-term, it is important that legislation is combined with targeted education campaigns and enforcement.

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HELMET LEGISLATION



MYTH: Helmet laws should not apply to adults.

Helmet legislation that pertains to all ages is absolutely necessary because both adult and children cyclists are at risk for head injury. Practicing safe cycling behaviour, including wearing a bike helmet, is not something adults outgrow.

Research demonstrates the important influence of adult role models on children's helmet wearing behaviour. Children are more likely to wear a bike helmet if their adult riding companions wear helmets. In one study, 95 per cent of children wore a helmet when riding with an adult wearing a helmet, while only 40 per cent of children wore a helmet when riding with an adult who was not wearing a helmet.¹

In addition, bike helmet legislation that applies to all ages eliminates the additional enforcement challenge of determining a cyclist's age without stopping them. All-ages bike helmet legislation would remove this obstacle to viable enforcement.

MYTH: Introducing and enforcing helmet legislation wastes time and money that could be put toward more important road safety initiatives.

Improving road safety must target all at-risk groups, including cyclists, pedestrians and motor vehicle drivers and occupants. Although it is important to invest time and money in reducing motor vehicle collisions and protecting motor vehicle occupants, increasing helmet usage amongst cyclists is vital. Wearing a helmet is a simple and cost effective approach to reducing head injuries among cyclists, and should not be overlooked.

Head injuries are the leading cause of severe injury to children on bicycles.² Many individuals with severe head injuries continue to live with enormous injury costs, which are borne largely by society. Investing resources in creating and enforcing helmet legislation to increase bike helmet use has significant cost saving potential. It has been estimated that for every one dollar spent on bike helmets, 30 dollars in injury costs are prevented.³ This amounts to approximately \$400,000 in medical costs in the first year of head injury alone.

Research strongly suggests that, at best, education programs alone are effective in bringing bike helmet use to only about 50 per cent of the population.^{4,5} Legislation, along with ongoing education and enforcement is necessary to exceed the 50 per cent mark and make bike helmet use an accepted social norm.⁶

MYTH: Helmet laws are just another attempt to restrict lifestyle choices and regulate the private lives of individuals.

Our society accepts many laws that offer protection to individuals even though they require us to relinquish some measure of freedom. For instance, 90 per cent of Canadians now use seat belts which suggest that most individuals are willing to comply with this law even if it restricts their freedom to some degree.⁷ Similar to seat belt laws, helmet laws are introduced to protect people from preventable injuries and keep individuals safe so



they can carry out daily activities that they enjoy.

Some critics argue that bike helmet laws will discourage people from cycling.⁸ There is no evidence to support this claim. In fact, a study in Toronto found that, following the introduction of bike helmet legislation for children, average cycling levels for children were actually higher than the year prior to legislation.⁹

A systematic review of the effectiveness of bike helmet legislation to increase helmet use found that after the law was introduced, bike helmet use increased.¹⁰ These studies demonstrate the positive effect of legislation in garnering helmet compliance. A recent study in Alberta found that after helmet legislation was introduced for those under age 18, helmet use increased by almost four times in this age group. In contrast, those over age 18, who were not affected by the introduction of the helmet law, did not significantly increase their helmet use.¹¹

Currently, there is not a strong body of evidence to demonstrate that cycling decreases when helmet laws are introduced. However, it is commonly known that those who suffer serious head injuries can face long term consequences and even permanent disability that may prevent them from participating in many healthy active forms of recreation. Research indicates that up to eight per cent of people discontinue a recreational activity because of a preventable injury.¹²

MYTH: The effectiveness of helmets and helmet laws in reducing head injuries is questionable.

Research illustrates that a properly fitted bike helmet helps protect the head by absorbing the force from a crash or a fall, and decreases the risk of a serious head injury by as much as 85 per cent and brain injury by 88 per cent.^{13, 14, 15} Systematic reviews have proved the effectiveness of bike helmets at reducing head injuries and the effectiveness of helmet legislation in increasing helmet use. Systematic reviews are widely regarded by researchers as reliable evidencebased assessments of health care practices.

A cross-Canada study has demonstrated that head injury rates among child and youth cyclists are about 25 per cent lower in provinces with helmet legislation, compared to provinces without legislation. Of the many factors examined in the study, only the presence of a bike helmet law in the child's province was significantly associated with a lower rate of hospitalization for head injury among young cyclists. Over the four year period studied, it was determined that 687 hospitalizations for head injuries to child cyclists could have been prevented if every province and territory had bike helmet legislation in place.¹⁶

Myth: Wearing helmets may give cyclists a false sense of security which may encourage them to take more risks.

Some critics assert that cyclists who wear helmets may feel more protected, resulting in greater risk-taking behaviour, with a subsequent increase in bicycle related injuries. If this theory is correct we might expect to see greater rates of injury overall after the introduction of bike helmet legislation, with the assumption that an increased number of helmet-wearing cyclists are taking more risks. However, current evidence contradicts this theory. Studies in several countries have revealed that after bike helmet legislation is introduced, head injury rates to cyclists have declined.¹⁷

These studies indicate that riders who wear helmets do not take greater risks than those who do not wear bike helmets. There is no credible scientific data to support the "risk compensation" theory. In fact, recent case-control research found that the use of protective equipment (various types) did not result in reports of greater risk-taking behaviour in the sample of children aged eight to 18 in this study.¹⁸



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SASKATOON CYCLES (SC)

**SUBMISSIONS TO
THE CITY OF SASKATOON
STANDING POLICY COMMITTEE ON
TRANSPORTATION**

BYLAW NO. 6884

“The Bicycle Bylaw”



**SUBMITTED BY THE BOARD OF
SASKATOON CYCLES INC**

July 2017

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III. Introduction

Founded in 2010, Saskatoon Cycles is a registered non-profit that advocates for a city in which cycling is a viable, year-round mode of transportation that is safe and convenient for all ages. Our vision for the City of Saskatoon includes a city where residents of all ages feel safe and welcome to cycle year-round and mutual respect and tolerance exists for all modes of transportation. In keeping with our organization's objectives and vision, we request that the City of Saskatoon reconsiders and revises Bylaw No. 6884 ("the Bicycle Bylaw") to remove potentially dangerous, confusing and outdated provisions and bring this bylaw in line with current best practices.

We frequently hear concerns from our members over several existing provisions in the Bicycle Bylaw and the city's attempts at enforcing these against them. In 2012, we polled our members to hear their concerns directly and the product of that polling was provided to the city for review. We also understand that the now defunct Cycling Advisory Group was working on seeking reform of uncontroversial items in collaboration with the city's administrative staff. Furthermore, we note that the City of Saskatoon's Active Transportation Plan expressly calls on the city to review and update the Bicycle Bylaw to ensure that it reflects best practices and emerging technologies and equipment.ⁱ For these reasons, we decided to build on our earlier work by making a submission directly to the Standing Committee on Transportation to facilitate an informed discussion of the bylaw by members of city council.

We note that a municipal corporation such as the City of Saskatoon exists to fulfill such purposes as developing and maintaining a safe and viable community and fostering the economic, social and environmental well-being of that community.ⁱⁱ These purposes must guide city council's exercise of its bylaw-making powers.ⁱⁱⁱ While we recognize that the city has wide discretion in regulating transportation through bylaws,^{iv} we further note that there are limits to the city's ability to impose dangerous conditions on cycling.^v We also question whether there might be limits to the city's ability to restrict people's access to and movement through public space by way of bicycle.^{vi} Furthermore, we note that there may be legal restrictions on the city's ability to discriminate between individuals traveling by bicycle and those using other modes of transportation with respect to access to public spaces such as roads and sidewalks.^{vii} We ask that the city bear these legal principles in mind when reviewing this submission and reconsidering provisions in the current Bicycle Bylaw.

We also recognize that the fulfillment of the city's obligations in terms of providing safe and equitable transportation options will require more than mere bylaw reforms. Greater investment in cycling infrastructure in the city is a priority for our organization and we acknowledge the significant steps that the city is taking in this regard, particularly by way of the Active Transportation Plan. Nevertheless, we believe that the Bicycle Bylaw must be reformed as part of a comprehensive approach to ensuring the safety, comfort and convenience of people traveling by bicycle in Saskatoon.

Finally, we note that the Saskatoon has unique considerations for our northern climate and for this reason we have tried to include examples of best practices from jurisdictions with broadly comparable winters in terms of sub-zero temperatures and substantial snowfall.

IV. Provisions of Concern

A. Use of horn or bell (section 6)

Our members have raised concerns with this provision being unwieldy, impractical, unnecessary and impossible to fully enforce. We strongly recommend that this section of the Bicycle Bylaw be removed in its entirety.

No empirical support for mandating use of bells or horns

In the preparation of this submission for reform to the Bicycle Bylaw we reviewed numerous studies of cyclist/motorist and cyclist/pedestrian collisions, including collision reports for the cities of Boston, Chicago, Denver, and Vancouver and coroner's reports from Ontario, Toronto, and New Zealand.^{viii} In spite of the number and variety of collisions analyzed in these reports and the number and variety of prescriptive recommendations for improved laws, education and enforcement coming out of these reports, it is notable that not one single report we found identified the failure to use bike bells or horns as a contributing factor in the crashes they analyzed. Likewise, not one single report we found recommended making the use of such devices mandatory, or even recommended greater education or enforcement with respect to use of such devices in preventing future collisions. In fact, we were unable to find any empirical

support whatsoever for the use of bike bells or horns as a safety device to protect either cyclists or pedestrians. On this basis alone, legally mandating the use of such devices is difficult to support.

Practical issues

Many people in the city use road bikes or triathlon bikes for competitions, exercise and training and these bikes are generally designed in such a way that their handlebars will not accommodate ordinary bells or horns. Furthermore, road and triathlon cyclists generally do not wish to further encumber their bikes with bells or horns when these bikes are designed to be as light as possible, are very fast moving and almost exclusively used on roads where bells and horns are of limited utility. We do not anticipate that many road or triathlon cyclists in the city comply with this section of the bylaw, nor do we believe that they should be mandated to.

It is also worth noting that there are many different types of bicycles used for many different types of legitimate purposes in Saskatoon, some of which do not involve commuting or regular interactions with pedestrians. We do not anticipate that a mandatory requirement for a bike bell or horn ought to apply to bicycles such as BMXs, fixed gears or certain types of mountain bikes when these are used solely for recreational purposes that do not give rise to any pedestrian/cyclist interactions, such as when used in skate parks or arenas for polo.

We also urge the city to consider whether a requirement for bicycles to be outfitted with bells or horns that are audible at a distance of not less than 35 metres away could ever possibly be enforced. The audibility of a horn or bell would vary greatly depending on such factors as ambient noise levels and weather conditions, for example. It is also hard to imagine how one could determine whether a particular bell or horn met this requirement before issuing a ticket for an infraction of this bylaw.

The “Bell or Yell” Debate

Some cyclists choose to simply slow down before passing another cyclist or pedestrian and will audibly tell that person that they are “(passing) on your left” before overtaking. We are not aware of any reason why doing so should be any less effective or more startling than the use of a bell or horn to alert pedestrians or other cyclists of one’s intention to overtake. We recognize differing views on whether use of a bell is more or less courteous than the use of one’s own voice (the so-called “bell or yell” debate). However, subjective preferences on cycling etiquette

do not provide defensible support for legally mandating use of a device that has not been empirically shown to improve safety for either cyclists or pedestrians.

Preferable provisions from other jurisdictions

It would be preferable for there to be no requirement for a bell or horn, as appears to be the case in many of the jurisdictions we examined for the purposes of this submission. By way of example, Ohio law no longer requires a bell or horn for cyclists,^{ix} nor does British Columbia's *Motor Vehicle Act*.^x Oregon law has created a more practical and flexible provision by requiring cyclists to "give an audible warning before overtaking and passing a pedestrian" without attempting to constrain how that audible warning might be given.^{xi} We also found numerous other states had either no requirement whatsoever for a bell or horn,^{xii} or had taken a similar approach to Oregon in allowing the use of one's voice as a suitable alternative to a bell.^{xiii} We strongly suggest that this provision be removed in its entirety. However, in the alternative, we suggest that the city not try to constrain how "audible warnings" are given so as to not impose impractical restrictions on certain types of cyclists.

B. Position on street (section 8)

As currently drafted, the bylaw requires people on bikes to be positioned on the street so "as to be as close as is reasonably practicable to the right hand curb" unless they are approaching an intersection and indicating an intention to turn. We submit that this requirement should either be removed in its entirety or further clarified with respect to additional justifiable exceptions to a general rule to stay right.

Hazardous conditions adjacent to curbs

This provision is of significant concern to our members due to ambiguity around the meaning of being "as close as is reasonably practical to the right hand curb". This could be interpreted as requiring cyclists to make room for motor vehicles to pass by hugging the curb, even though this part of the street is often poorly maintained, pot-holed and full of gravel and other hazards. This provision could also be interpreted as negating a cyclist's right to "take the lane" when they are concerned that it would be unsafe for a motor vehicle to try to pass them due to the presence of hazards such as these. The city also ought to consider how such an ambiguous

requirement could interact negatively with any duty of care it may owe to people on bikes in terms of proper maintenance of roads.^{xiv}

Inconsistency with cycling best practices

The city ought to consider how such an ambiguous requirement might inadvertently encourage people on bikes to engage in dangerous behaviour such as riding within a door's length of parked cars or weaving in and out between parked cars in order to stay as far to the right as possible. The Saskatchewan Prevention Institute recommends that people ride their bikes in a straight line one metre away from parked cars to ensure they remain visible to motorists and out of danger from car doors suddenly opening or parked cars suddenly pulling into traffic.^{xv} The Prevention Institute also recommends that people ride bicycles one metre away from the curb in order to maintain visibility and avoid holes, debris, grates and other hazardous objects often found directly adjacent to the curb.^{xvi} The City of Saskatoon's own Cycling Rules of the Road likewise acknowledge the right to ride one's bike in the centre of any traffic lane, and advise people to always ride in a straight line, not weave in and out of parked vehicles, and allow room on both one's right and left to get around hazards or to move aside if you are passed too closely.^{xvii} It is hard to square the city's own understanding of the rules of the road and cycling best practices with a bylaw provision that says little more than 'keep right except when turning'.

Unfavourable treatment of bicycles compared to other vehicles

It is also worth considering whether this provision might unduly discriminate between bicycles and other motor vehicles. Bicycles are lumped in with other vehicles for the purposes of provincial traffic safety laws,^{xviii} yet this provision of the bylaw singles bicycles out in mandating cyclists to keep to the right of any traffic lane in which they find themselves (as opposed to keeping to the right lane on multi-lane routes). This is particularly concerning since a considerable proportion of fatal bicycle-motor vehicle collisions occur when motorists attempt to pass cyclists from behind without waiting for a gap in traffic to ensure they are passing at a safe distance.^{xix} It is also concerning in light of the significant number of bicycle-motor vehicle collisions that involve "doorings" from parked cars, especially on major streets with parked cars and no cycling infrastructure.^{xx} The city may wish to consider whether such unfavourable discrimination against bicycles in terms of where they ought to be positioned on the street is advisable in light of the hazards it may create for cyclists.

Preferable provisions from other jurisdictions

Several American jurisdictions have a similar requirement for bicycles to be “as close as reasonably practicable to the right hand of the curb” but have set out a greater number of exceptions to this general rule that favour the safety of cyclists. Relevant exceptions to staying right in these jurisdictions include: when overtaking or passing another vehicle; when reasonably necessary to avoid other vehicles or obstructions; where there are narrow lane widths or other hazards; where there are three lanes of traffic; and where there is one way traffic.^{xxi}

Ontario’s *Highway Traffic Act* provides for several similar exceptions to those set out in American jurisdictions.^{xxii} British Columbia’s *Motor Vehicle Act* also has a noteworthy exception that none of its restrictions on cyclists “require a person to ride a cycle on any part of a highway that is not paved”.^{xxiii}

We also strongly recommend a ‘catch all’ exception to the requirement to staying right where doing so would compromise a cyclist’s safety. For example, consider the following exception language from Ohio’s traffic laws with respect to vehicles staying to the right of lanes: “Nothing in [...] this section requires a driver of a slower vehicle to compromise the driver’s safety to allow overtaking by a faster vehicle”.^{xxiv} While that language is drafted for a law that impacts bicycles and other vehicles equally, it could easily be adapted for inclusion in the Bicycle Bylaw, which we strongly recommend if the city is to continue to have any rule for staying right in the Bicycle Bylaw.

One metre minimum passing distance requirement

Several jurisdictions across the world have implemented requirements for motor vehicles to provide at least one metre of space to cyclists when overtaking them, which ensures that motorists have countervailing obligations towards cyclists in these circumstances rather than putting the onus solely on the more vulnerable road user. Twenty-six American states have already enacted requirements for motorists to provide cyclists with at least two feet of space when passing, and two additional states have implemented even greater space requirements for passing cyclists.^{xxv} Either one metre or 1.5 metre minimum passing distances are also required in various other jurisdictions including the Netherlands, France, Portugal, Belgium, Spain, and the Western Cape Province of South Africa.^{xxvi} In Australia, the state of South Australia requires a one metre passing distance on roads with speeds up to 60km/h and 1.5 metres on roads with higher speeds. Similar minimum passing distances are also being trialed in

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the states of Queensland, New South Wales and the Australian Capital Territory, and a parliamentary inquiry is currently investigating minimum passing distances for Victoria.^{xxvii} Here in Canada a one metre passing distance is required in both Ontario and Nova Scotia.^{xxviii}

The city ought to consider whether setting a one metre minimum passing distance within Saskatoon by bylaw is feasible and desirable. While it would be ideal for such a restriction to apply across the province through an amendment to the *Highway Traffic Act*, it may be possible for the city to take the lead on this through its more localized jurisdiction.

C. Prohibition against cycling on sidewalks (section 8)

As currently drafted, the bylaw also requires cyclists to “utilize only that portion of the street as is intended for the passage of motor vehicles”, which we interpret as prohibiting usage of bicycles on sidewalks in the city, except where otherwise provided for. We suggest that this section of the bylaw ought to be carefully revised to allow for cycling on the sidewalks in certain circumstances.

Hazardous conditions on roads

First and foremost, we are concerned that a blanket restriction on cycling on sidewalks is not equally practical in all neighbourhoods and areas of the city, nor is it necessarily practical during all seasons. For example, in areas of the city that are frequented by industrial vehicles it can be intimidating and dangerous for cyclists to ride on the road during periods of heavy traffic. To the extent that some of these same roads have sidewalks, we strongly encourage the city to recognize the need for an exception for the use of bicycles on those sidewalks to avoid such hazardous and intimidating roadways. We are also aware that many of our members refuse to cycle on highly trafficked roadways during the winter and opt for riding on the sidewalks in order to avoid snow and ice on roads where a significant amount of motor vehicle traffic is present. Again, we strongly suggest that the city consider how a blanket prohibition on cycling on sidewalks could interact negatively with any duty of care it may owe to people on bikes in terms of proper maintenance of roads.^{xxix} We strongly advocate against the city mandating people to ride their bikes in such a manner as might put them in danger.

Inconsistency of application

We are also concerned that this blanket prohibition against cycling on sidewalks is paired with various ad hoc exceptions that make it difficult to know where this restriction applies and where it might not apply. For example, the bylaw currently exempts cycling on the sidewalk portions of bridges in the city from this prohibition at section 21(c). We are also aware that sections of the sidewalks that link to the bridges provide for a similar exemption, having been designated for ‘shared use’. In practice, however, we are aware of conflicts between pedestrians and cyclists on these shared use sidewalks based on the general presumption of some pedestrians that cyclists never have a right to ride on sidewalks. We are also aware of confusion that cyclists face in determining where sidewalks cease to be available for shared use, which can lead to further pedestrian-cyclist conflict. While we advocate that the city pursues the ultimate goal of having effective and connected cycling infrastructure throughout the city so that cycling on sidewalks is never necessary, the status quo in Saskatoon involves a complex patchwork of exceptions to the general prohibition against riding on sidewalks that makes it confusing and difficult to conform to this rule in all instances.

Application to children of all ages

Furthermore, we have concerns over the broad application of the prohibition against cycling on sidewalks so as to include children of all ages within its ambit. Bearing in mind differences in terms of overall vulnerability, level of awareness and control, level of speed and agility, and matters of size and visibility as between young children and adults, as well as the types of bicycles designed for them, we strongly suggest that the city consider exempting children under a certain age from this prohibition’s application. We strongly discourage the city from mandating that children operate their bicycles in such a manner as might put them in danger.

Preferable provisions from other jurisdictions

We suggest that the city consider whether it would be appropriate to generally allow cycling on sidewalks subject to explicit restrictions, as is the case in Oregon.^{xxx} Oregon law provides cyclists riding on sidewalks with the same rights and duties as pedestrians, subject to various restrictions that constitute “unsafe operation of a bicycle on a sidewalk”.^{xxxi} The restrictions on cycling on sidewalks are limited to prohibitions against: (a) suddenly leaving the curb and entering the path of vehicle that is close enough to constitute an immediate hazard; (b) not giving an audible warning before overtaking or passing a pedestrian and not yielding the right of

way to all pedestrians on a sidewalk; (c) cycling in a careless manner that is likely to endanger a person or property; (d) cycling at a speed greater than an ordinary walk when approaching or entering a crosswalk, approaching or crossing a curb or pedestrian ramp when a motor vehicle is approaching; or (e) operating an electric assisted bicycle on a sidewalk. We submit that these onerous restrictions on cycling on sidewalks may obviate the need for a blanket prohibition against cycling on sidewalks.

If necessary, these prohibitions could also be paired with area restrictions against cycling on sidewalks along designated streets where there is a higher likelihood of pedestrian-cyclist collisions, such as areas where pedestrians are regularly entering and exiting buildings (for example, along Broadway, 20th or in the downtown core).

In the alternative, we suggest that the city considers adding further exemptions such as those set out in Finland's *Road Traffic Act*, which allows children under 12 to ride their bikes on the sidewalk so long as they do not unduly interfere with pedestrian traffic.^{xxxii} It also allows all cyclists temporary use of the sidewalks where they have "special reasons" for doing so, so long as this use does not cause danger or considerable inconvenience to pedestrians. These exemptions could help address some of the concerns set out above with impracticalities around the current status quo in this regard.

One final point would be that however the city chooses to proceed with the issue of cycling on sidewalks, it is important that adequate direction is provided for the benefit of cyclists, pedestrians and motorists alike in terms of clarifying what is allowed and what is not. We strongly encourage the city to provide clear road paint or signage for this purpose, especially where there is currently an unclear transition between shared paths and sidewalks that are intended to be exclusively used by pedestrians.

D. Stunting (section 10)

While our members had not raised any particular concerns over this provision in our previous consultation and we have not given it priority in this review of the Bicycle Bylaw, we do encourage the city to consider whether a provision prohibiting cyclists from engaging in "any acrobatic or other stunt" is consistent with the city funding the construction and maintenance of numerous skateboard parks that may be reasonably expected to be used by individuals on

BMX and freestyle fixed gear bicycles, among other types of bicycles. Such a restriction can also be seen as conflicting with recreational trails throughout the city used by individuals on mountain bikes. We also encourage the city to consider how a general prohibition on stunting might discriminate between bicycles and other recreational modes of transportation such as skateboards or roller skates or blades that might reasonably be expected to be used for “stunting” purposes, especially in designated parks.

The city might consider simplifying this paragraph so that it maintains a requirement for cyclists to keep at least one hand on the handlebars at all times (see discussion of “loads” below), but removing the remainder of the provision.

E. Passengers (section 11)

Our members have raised concerns with this provision being obsolete and unnecessary due to the proliferation of types of bicycles that are purpose built for carrying more than one passenger, most of which would not be caught by the overly specific and obscure exception for bicycles with “a properly constructed pillion seat securely fastened over the rear wheel”. We strongly recommend that this section of the Bicycle Bylaw be removed in its entirety.

Preferable provisions from other jurisdictions

If the city insists on having an alternative provision in place that prohibits ‘doubling’ on bicycles not built for more than one passenger—an objective that we neither endorse nor encourage absent more data to suggest that such a prohibition is necessary and advisable—then the city ought to at least consider using simpler and more effective language to accomplish this goal. For example, Ontario’s *Highway Traffic Act* simply states that “[p]assengers are not allowed on a bicycle designed for one person”,^{xxxiii} which ensures that multi-passenger bicycles designed for that purpose are not inadvertently caught by this section of the bylaw. A similar provision is found in British Columbia’s *Motor Vehicle Act*, where it is stated that a cyclist “must not use the cycle to carry more persons at one time than the number for which it is designed and equipped”.^{xxxiv}

F. Loads (paragraph 12)

Our members have raised concerns with this provision being unnecessary as we are not aware of any data or evidence to suggest that over-loading of bicycles has been causing accidents in the city or elsewhere in the province. We recommend that this section of the Bicycle Bylaw also be removed in its entirety.

Preferable provisions from other jurisdictions

We further note that many other jurisdictions have not found load restrictions necessary in light of requirements for cyclists to be able to keep at least one hand on their handlebars at all times. For example, in Oregon a cyclist “commits the offense of having an unlawful load on a bicycle if the person is operating a bicycle and the person carries a package, bundle or article which prevents the person from keeping at least one hand upon the handlebar and having full control at all times”,^{xxxv} effectively tying these two restrictions together. California law has similarly created a load restriction that is only engaged where a package “prevents the operator [of a bicycle] from keeping at least one hand upon the handlebars”.^{xxxvi} Load restrictions are also notably absent from the restrictions on cyclists set out in Ontario’s *Highway Traffic Act* and British Columbia’s *Motor Vehicle Act*.

Practical issues

We also wish to highlight the difficulty that the city would have in enforcing this section of the Bicycle Bylaw as currently drafted since it sets out precise dimensions and weight in terms of the restrictions that it imposes. Further still, the city ought to consider how this provision might conflict with the use of bicycles that have been specifically designed for carrying very large loads, as there are bicycles designed for transportation of large packages as well as bicycles designed for touring purposes that are engineered so as to accommodate large weights that other bicycles may not safely and comfortably accommodate.

G. Obligatory use of cycling lanes (section 13)

Our members have raised concerns with this provision being unnecessary, unwieldy and, where cycling lanes are not properly designed or maintained, dangerous. We recommend that this section of the Bicycle Bylaw also be removed in its entirety.

Hazardous conditions in cycling lanes

Of greatest concern is that this provision could require cyclists to use cycling lanes even where these are often poorly maintained and full of gravel and other hazards, especially in winter. While we are strongly in support of protected cycling lanes and believe that these lanes are well-used by cyclists when properly designed and maintained, we commonly hear concerns from our members over gravel, dirt and debris accumulating in ‘painted on’ cycling lanes, and we believe that the city is already well aware of issues that the protected cycling lanes on 23rd Street have faced with accumulated rainwater, snow and ice during the winter, which can render these dangerous during certain conditions. Again, we submit that the city ought to consider how mandating the use of cycling lanes might negatively interact with any duty of care the city may owe to people on bikes in terms of proper maintenance of roads.^{xxxvii}

Unfavourable treatment of bicycles compared to other vehicles

We also submit that the city ought to consider whether this provision might unduly discriminate between bicycles and other motor vehicles. Again, while bicycles are lumped in with other vehicles for the purposes of provincial traffic safety laws,^{xxxviii} this provision of the bylaw singles bicycles out in mandating the use of cycling lanes with only a limited exception for turning. We did not find analogous restrictions in other jurisdictions that we investigated. In fact, we found that similar restrictions were notably absent from the relevant provincial laws in Ontario and British Columbia.

Preferable provisions from other jurisdictions

British Columbia’s *Motor Vehicle Act* explicitly reiterates that aside from the exceptions that it explicitly sets out, which do not mandate use of cycling lanes, “a person operating a cycle on a highway has the same rights and duties as a driver of a vehicle”.^{xxxix} We suggest that the city should take a similar non-discriminatory position on cycling, allowing people travelling by

bicycle to choose whether or not to use cycling infrastructure depending on the conditions in which they find that infrastructure.

In the alternative, we suggest that the city provide for more explicit exceptions to a general requirement for use of cycling lanes. For example, in Oregon use of cycling infrastructure is not obligatory when: (a) overtaking another bicycle; (b) preparing to execute a left turn; (c) avoiding debris or other hazardous conditions; (d) preparing to execute a right turn; (e) continuing straight at an intersection where the bicycle lane is to the right of the lane from which a motor vehicle must turn right.^{xl} There are very important practical reasons for including such exceptions, as discussed below.

Practical issues

Where cycle lanes are protected, there is a further issue around making left turns. A cyclist might choose not to enter the cycling lane on 23rd Street, for example, so as to safely and easily make a left turn onto a perpendicular road. Forcing cyclists to use the cycling lane at all times would make for overly burdensome restrictions when it might be easier, safer and more intuitive to make the turn from the traffic lane itself.

We are also concerned with the potential for this section to encourage conflicts between motorists and cyclists where the latter users of road infrastructure are non-compliant due to concerns over safety and practicality. As cyclists are the more vulnerable user group between the two, we strongly recommend against provisions that further entitle motorists to use of roads at the expense of the safety and practicality of cycling in the city.

H. Dismounting to pass pedestrians (section 21(c))

Our members have raised concerns with this provision being unnecessary and impractical. We strongly suggest that the city remove this provision in its entirety.

Practical issues

First and foremost, the provision is simply illogical. If a cyclist is forced to dismount their bicycle in order to pass a pedestrian on foot, a practical issue then arises as to how they can walk faster, while pushing their bike, so as to still pass that pedestrian once dismounted.

Furthermore, the question arises as to how they can still comfortably pass that pedestrian once dismounted, as you then have a person and their bike, side-by-side, attempting to pass another person. If anything, dismounting the bike to pass should only make the experience more uncomfortable and inconvenient for the pedestrian who might otherwise be seen to benefit from this rule but is now crowded out in the small sidewalks that traverse our main downtown bridges. The situation becomes even more unwieldy where a cyclist might be carrying a load, elderly or otherwise less physically capable of pushing their bikes across the bridges, two of which have notable inclines.

We encourage the city to consider whether there is any merit or benefit from this restriction when the Bicycle Bylaw already otherwise provides pedestrians with a right of way that cyclists must yield to, among other restrictions. It is unclear to us what further benefit might be obtained by this confusing and impractical restriction.

V. Summary of Recommendations

- 1) Either remove the requirement for a horn or bell or replace this with a requirement that an audible warning be given before pedestrians are overtaken and passed**
- 2) Either remove the requirement for cyclists to stay close to the right curb or revise this requirement to include a greater number of exceptions**
- 3) Consider implementing a one metre minimum passing distance for motor vehicles overtaking cyclists within city limits**
- 4) Remove the blanket prohibition against cycling on sidewalks and replace this with either area and behavioural restrictions as to where and how cycling on sidewalks can be safely conducted or provide exemptions for children under 12 and temporary use of sidewalks to avoid hazardous conditions**
- 5) Remove the prohibition against stunts and acrobatics on bicycles**
- 6) Remove or substantially revise the prohibition against passengers on bicycles to accommodate the full variety of bicycles designed for such purposes**
- 7) Remove the load restrictions on cyclists**
- 8) Remove the requirement for cyclists to use cycling lanes or revise this requirement to include a greater number of exceptions**
- 9) Remove the requirement for cyclists to dismount before passing pedestrians while crossing bridges in the city**

VI. References

ⁱ City of Saskatoon, *Active Transportation Plan: Final Report* (Urban Systems Ltd: June 2016) at 86.

ⁱⁱ *The Cities Act*, SS 2002, c C-11.1, ss 4(2)(c) & (d).

ⁱⁱⁱ See, for example, *Halifax (Regional Municipality) v Canada (Public Works and Government Services)*, 2012 SCC 29 at [55], and *Catalyst Paper Corp v North Cowichan (District)*, 2012 SCC 2 at [25].

^{iv} *Ibid*, s 8(1)(e).

^v See, for example, *Canada (AG) v Bedford*, 2013 SCC 72 for a discussion of the circumstances in which a government's imposition of dangerous conditions on an otherwise legal activity might unjustifiably infringe an individual's right to life, liberty and security of the person under section 7 of the *Canadian Charter of Rights and Freedoms*. Coincidentally, the Supreme Court of Canada raised a hypothetical example of a law making cycling more dangerous in its discussion of the causal connection required in order to find such a law unconstitutional under section 7 of the *Charter* (see para [87]).

^{vi} See, for example, *R v Heywood*, [1994] 3 SCR 761, *R v Budreo*, (2000) 46 OR (3d) 481 (ONCA) and *Baril v Obelnicki*, 2007 MBCA 40 for discussions of how restrictions on an individual's freedom of movement or to roam in places where the rest of the public is free to roam can engage that individual's liberty under section 7 of the *Charter*. See also *R v SA*, 2014 ABCA 191: While a majority of the Alberta Court of Appeal expressed significant doubt that section 7 could extend to protect an individual's right to access and use public transportation, it is worth noting that they relied in part on the possibility of the appellant purchasing a secondhand bicycle in concluding that her poverty did not mean that a ban from public transit infringed her section 7 rights. In dissent, Bielby JA concluded that a ban from public transportation did engage the appellant's section 7 rights as it was necessary for her to access goods and services in the City of Edmonton. It is therefore at least worth considering whether some economically marginalized residents of the City of Saskatoon might have their section 7 rights engaged by extensively prohibitive restrictions on cycling.

^{vii} See for example *Elbow Valley Cycle Club v Rockyview (Municipal District No 44)*, (1997) 50 Alta LR (3d) 150 (ABQB) where the Court quashed a bylaw that prohibited cyclists from riding on a particular public roadway on the basis that this bylaw discriminated between motor vehicles and bicycles in a way that was not expressly authorized by Alberta's *Highway Traffic Act*, RSA 1980, c H-7. Note that discrimination in this administrative law sense is different than the forms of discrimination prohibited under the *Charter* or domestic human rights legislation. For further discussion of this limit on bylaw-making powers see for example: *Montréal v Arcade Amusements Inc*, [1985] 1 SCR 368, *R v Sharma*, [1993] 1 SCR 650, and *Greater Victoria School District No 61 v Oak Bay (District)*, 2006 BCCA 28.

viii City of Boston, *Cyclist Safety Report* (2013); City of Chicago, *2012 Bicycle Crash Analysis: Summary Report and Recommendations* (2012); City of Toronto, *Bicycle/Motor Vehicle Collision Study* (2003); Denver Public Works, *Bicycle Crash Analysis: Understanding and Reducing Bicycle & Motor Vehicle Crashes* (2016); Dr. Koorey, *New Zealand Chief Coroner's Inquiry Into Cycling Deaths* (2013); Office of the Chief Coroner for Ontario, *Cycling Death Review* (2012); Urban Systems, *Cycling Safety Study: Final Report for City of Vancouver* (2015).

ix Section 4511.56, *Ohio Revised Code* (2006).

x Section 183, *Motor Vehicle Act*, RSBC 1996, c 318.

xi Section 814.410(1)(b), *Oregon Revised Statutes*, vol 15, c 814 (2015).

xii See for further examples: section 42-4-221, *Colorado Revised Statutes*, c 42; section 46.61.780, *Revised Code of Washington*, c 46.61; section 21201, *California Vehicle Code*, c 479; section 169.222, *Minnesota Statutes*, c 169; section 347.89, *Wisconsin Statutes*, c 347; section 9-21-11-8, *Indiana Code 2016*, c 11.

xiii See for further examples: section 316.2065(10), *Florida Statutes*, c 316; section 61-8-608, *Montana Code Annotated 2015*, c 450; section 11B, *Massachusetts General Laws*, c 85.

xiv See for example *Johnson v Milton (Town)*, 2008 ONCA 440 and *Wong v Vancouver (City)*, 2001 BCSC 693.

xv See Saskatchewan Prevention Institute, Bike and Wheel Safety/Bicycle Safety Week, Rules of the Road <online: [http://www.skprevention.ca/bike-and-wheel-safety/#Rules of the Road](http://www.skprevention.ca/bike-and-wheel-safety/#Rules%20of%20the%20Road) – accessed 26/03/16>.

xvi *Ibid.*

xvii See City of Saskatoon, Information for Cyclists, Cycling Rules of the Road <online: https://www.saskatoon.ca/sites/default/files/documents/cycling_guide_web.pdf - accessed 26/03/16>.

xviii See *The Highway Traffic Act*, SS 1986, c H-3.1, s 2(1)(hh) and *The Traffic Safety Act*, SS 2004, c T-18.1, s 2(1)(ccc). See also *Jones v Falconer*, (1993) 114 Sask R 121 (SKQB).

xix See for example Office of the Chief Coroner for Ontario, *Cycling Death Review* (2012) at 24. The Office of the Chief Coroner of Ontario found that the majority of the 129 cyclist deaths that occurred in Ontario between January 1, 2006 and December 31, 2010 were caused by motorists passing cyclists from behind at unsafe distances, leading the Office to recommend the introduction of a one meter/three foot passing rule. See also the City of Toronto Works and Emergency Services Department, *Bicycle/Motor Vehicle Collision Study*, 2003, which involved the review of 2,572 car/bike collisions that occurred between 1997 and 1998. The study found that 11.9% of all collisions occurred when cyclists were overtaken by motorists and these collisions were more likely to be either minimal or fatal, with fewer 'in-between' injuries than other types of collisions (p 95). In 13.4% of these collisions motorists were found to have

misjudged how much space was available to pass. See also W.W. Hunter et al, “Bicycle Crash Types: A 1990s Informational Guide”, US Dept of Transportation (1997), which studied 3,000 bicycle-motor vehicle crashes in six states, finding 8.6% of crashes occurred when motor vehicles overtook cyclists and 28% of cyclists involved in such crashes sustained serious or fatal injuries.

^{xx} See for example Kay Teschke et al, “Bicycling crash circumstances vary by route type: a cross-sectional analysis”, BMC Public Health 2015, 24:1205. The authors examined data from 690 cycling crashes reported in Vancouver and Toronto between May 2008 and November 2009, finding that 9.2% of these crashes involved vehicles doors, with the majority occurring on major streets with parked cars and no cycling infrastructure. See also the City of Toronto *Bicycle/Motor Vehicle Collision Study*, 2003, referenced above. The study found that 11.9% of car/bicycle collisions between 1997 and 1998 involved vehicles doors and these collisions resulted in injuries that were more severe than average (p 83).

^{xxi} See for example 2015 Minnesota Statutes, 169.222 Operation of Bicycle, subd. 4 Riding Rules, which provides exceptions for overtaking and passing another vehicle, preparing for a left turn, avoiding hazards, and when riding on a shoulder or in a bicycle lane. See also the California Vehicle Code 21202(a), which provides similar exceptions and only requires bicycles to keep right where they are being operated at a speed less than the normal speed of traffic moving in the same direction. See also Ohio Bill 389, 4511.55 for similar exceptions to a general rule that bicycles should keep right. See also Nova Scotia’s *Motor Vehicle Act*, RSNS 1989, c 293, section 171(4).

^{xxii} Section 147(2), *Highway Traffic Act*, RSO 1990, c H.8.

^{xxiii} Section 183(3), *Motor Vehicle Act*, RSBC 1996, c 318.

^{xxiv} Section A(2), *Ohio Revised Code*, Chapter 4511.25 (2016).

^{xxv} See National Conference of State Legislatures, Safely Passing Bicyclists Chart (12/17/2015) <online: <http://www.ncsl.org/research/transportation/safely-passing-bicyclists.aspx> - accessed 03/26/16>, which lists Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Kansas, Louisiana, Maine, Maryland, Minnesota, Mississippi, Nebraska, Nevada, New Hampshire, Oklahoma, Tennessee, Virginia, Utah, West Virginia, Wisconsin, Wyoming and the District of Columbia as having 3ft passing laws. It also lists Pennsylvania as having a four foot passing law and South Dakota having a two-tiered passing law with a 3ft requirement on roads with speed limits less than 35mph and a 6ft requirement on roads where any greater speed is allowed.

^{xxvi} N Haworth & A Schramm “The safety of bicycles being overtaken by cars: What do we know and what do we need to know?” Proceedings of the 2014 Australasian Road Safety Research, Policing & Education Conference.

^{xxvii} Amy Gillett Foundation, A Metre Matters – National update, March 2016 <online: <http://www.amygillett.org.au/wp-content/uploads/2016/03/1.-A-metre-matters-national-update-March-2016.pdf> - accessed 03/26/15>.

^{xxviii} See Ontario's *Highway Traffic Act*, RSO 1990, c H.8, section 148(6.1). See also Nova Scotia's *Motor Vehicle Act*, RSNS 1989, c 293, section 171B(1)(b).

^{xxix} See for example *Johnson v Milton (Town)*, 2008 ONCA 440 and *Wong v Vancouver (City)*, 2001 BCSC 693.

^{xxx} Section 814.450, *Oregon Revised Statutes*, vol 15, c 814 (2015).

^{xxxi} Sections 814.450 (1) & (2), *Oregon Revised Statutes*, vol 15, c 814 (2015).

^{xxxii} Section 8, *Road Traffic Act* 1981/267 (Finland).

^{xxxiii} Section 178(2), *Highway Traffic Act*, RSO 1990, c H.8.

^{xxxiv} Section 183(2)(g), *Motor Vehicle Act*, RSBC 1996, c 318.

^{xxxv} Section 814.410, *Oregon Revised Statutes*, vol 15, c 814.

^{xxxvi} Section 21205, *California Vehicle Code*, c 479.

^{xxxvii} Again, see for example *Johnson v Milton (Town)*, 2008 ONCA 440 and *Wong v Vancouver (City)*, 2001 BCSC 693.

^{xxxviii} See *The Highway Traffic Act*, SS 1986, c H-3.1, s 2(1)(hh) and *The Traffic Safety Act*, SS 2004, c T-18.1, s 2(1)(ccc). See also *Jones v Falconer*, (1993) 114 Sask R 121 (SKQB).

^{xxxix} Section 183(1), *Motor Vehicle Act*, RSBC 1996, c 318.

^{xl} Section 814.420(3), *Oregon Revised Statutes*, vol 15, c 814 (2015).

VI. Membership Feedback

In order to ensure that this submission reflects the firsthand experiences and occasionally divergent views of our membership, Saskatoon Cycles posted the submission in draft form on our website for several months and asked our members to review the submission and provide comments to us via email. Furthermore, we hosted an open house on February 22, 2017 to discuss the submission with our members and recorded further comments we heard during that open house. Overall, the members who contacted us about this submission were broadly in favour of its recommendations though commenters diverged on certain issues not addressed in this submission, such as whether lights should be mandatory. We have included summaries of the feedback from our members on the recommendations set out in this submission below.

Comments received by email (verbatim)

Comment #1

Hi,

First of all, good work on the draft document. It is as if I wrote it, as I believe that cycling on sidewalks should be allowed in the cases you mention. I am a bit concerned about your embracing Finland's under 12 idea. It isn't any safer for a 13-yr-old than it was for the 12-yr.-old. I embrace Oregon's cycling bylaws which allow for cycling on sidewalks and IF there is an infraction there can be consequences. Until such time, cycling is allowed on sidewalks. The problem, is, of course, the rotten apple cyclist who scares pedestrians, possibly even colliding with same. Someone I know said that she is afraid to walk on the Meewasin because of the dangerous cyclists on the blind curves, etc. She is honestly fearful of serious injury or worse. I don't know what we can do about these cyclists.

I sincerely hope city council takes your suggestions to heart.

Of course, the next best thing is to have great cycling paths, something that we certainly DO NOT have now. I am constantly confused as to why drivers would not want safe lanes. It would be a win-win solution because cyclists would not be slowing vehicular traffic and it would be safer for those who live to cycle, which is what I do. Cycling in winter certainly presents its own problems. Drivers maybe don't realize that a cyclist really has no place to ride except in the

path of the vehicle. The edges of the street have ridges narrow enough that a cyclist cannot ride there safely. Or there is the brown snow that is so dangerous. Or there is the ice, equally dangerous. I have had, on a daily basis, drivers speeding beside me as I am on the street. If I happened to swerve an inch I would be nailed by these speed demons. I appreciate so much the drivers who actually slow down and pass with plenty of space. Maybe we need a public education on the dangers of cycling and what motorists could do to make things safer.

In addition, for winter cycling I would suggest that the city make a concerted effort to plough side streets in both directions so cyclists can avoid main drags. For instance, after a snow, I am unable to cycle as I am restricted to main streets on which I will have to cycle IN the driving lane as there is nowhere else to go. If, for instance, 1st Street were cleared so one could avoid Taylor-- and Morgan from Taylor to 1st--then another north south, etc, one could safely go downtown, for instance.

Keep up the good work. I know I should volunteer for something and I will, eventually.

Sincerely,

<name redacted for privacy>

Comment #2

BRAVO!

As a frequent cyclist in the City of Saskatoon I take no strong issue with any of the recommendations, and have no hesitation in supporting the submission as a whole.

My two niggles are nothing more than that — niggles, but I offer them as evidence that I have read and considered the submission in detail.

- 1) My preference would be for a minimum leeway of 1.5 metres given by any vehicle passing another vehicle (including bicycles as “vehicles” in either instance.
- 2) Rather than a one-hand-on-the-handlebars rule, might a prohibition against cycling in a “dangerous or reckless manner” give enforcement authorities more discretion to use good sense, while at the same time putting the onus on them to satisfy a court that the behaviour was dangerous or reckless, rather than requiring the cyclist to prove that it wasn’t?

On the whole, an admirable piece of work. Thank you, and good luck in taking this project forward.

<name redacted for privacy>

Comment #3

Saskatoon Cycles:

I have read the suggested Bylaw Reform recommendations as proposed by Saskatoon Cycles and strongly support the comments and alternatives which have been presented. I most strongly support the right to choose the portion of the right-of-way which is deemed safest to the cyclist (be it street lane, bike lane, or sidewalk) based on conditions and environmental specifics.

I will reiterate the benefits of having a minimum passing distance of 1.0 meter for speeds of 60 km/hr or less and 1.5 metres for areas of greater speed limits.

Lastly, the City need only read the SGI manual on proper lane positioning for motorcycles to learn about proper lane positioning. This applies directly to urban cycling due to the need to maintain cyclist visibility and prohibit passing by other vehicles when it is unsafe to do so.

Thank you for your dedication to promoting cycling in Saskatoon and providing guidance to our municipal leaders on this front. As a seasonal resident in Saskatoon and home owner in the Nutana Park area I sincerely appreciate your efforts.

Best Regards,

<name redacted for privacy>, P.Eng.

Civil Engineer and Cycle Infrastructure Designer

Vancouver, BC.

Comment #4

Another suggestion for practicality of bells:

I don't have a bell at present because it was stolen. Thefts of bike and bike parts has risen sharply in the past couple of years. I have not bought a new bell because of where I park my bike – thefts of bike components are common and I feel a new bell would simply be stolen.

Thanks,

<name redacted for privacy>

Comment #5

I love your proposed revisions. Any chance of adding an Idaho Stop clause, or is that just shooting for the moon?

Thanks for your work,

<name redacted for privacy>, P.Eng
Design Engineer

Comment #6

Hi,

I just wanted to say that the reform document is great -- clear, well researched and well written.

The only suggestion I have is to give the section on allowing children to cycle on the sidewalk more prominence. A bylaw that forces young children learning to ride to do so on the street is absurd.

<name redacted for privacy>

Comment #7

These are great, thank you for submitting them. I have one concern/annoyance.

When I cycle the streets, I try not to use the sidewalks, one of the most frustrating things is that some traffic lights are designed to recognize a car and only change when triggered by a car. I

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find I have to go to the sidewalk and activate the walk light which then means I end up cycling on the sidewalk. Is there any way to change this?

Thanks for your work,

<name redacted for privacy>

Comment #8

I would like to extend my appreciation for all of the work that went into this document. Thank you to everyone contributing.

I am a regular commuter and recreational cyclist. The suggested changes in this document are on the whole reasonable and long overdue.

On the topic of keeping to the right I would encourage stronger language that makes the default position a cyclist's right to take a lane. In my experience, on most streets with parked cars the combination of 1m distance from the parked car, 1m passing distance and 60-70cm wide handlebars makes it impossible for a vehicle to safely pass without moving into the oncoming lane or left lane.

Rather than a debate on how far to the right a cyclist should be, I would prefer language that tells cyclists that their proper position is in the center of the rightmost lane.

Cheers,

<name redacted for privacy>

Comment #9

A Job Excellently done.

I am a bicycle commuter on city streets. This is well written and researched. I personally would endorse all recommendations made, both from a cyclist and a motorist perspective.

I have not read the city bylaw and so assume it has dealt with bicycle lighting appropriately. I truly hope the city is able to get behind the recommendations and then do a public education campaign.

Thank you all for hard work done on everyone's behalf.

Sincerely,

<name redacted for privacy>

Comment #10

This bylaw review is very well done and thorough. The research appears to be very deep and comprehensive and the recommendations are excellent.

However, one can anticipate resistance from city staff and councilors whose focus is on motor vehicle convenience as more important than promotion and safety for cycling. There will be objections. It will be important for concerned cyclists to lobby their councilors to give this bylaw review serious consideration. After all, it has been researched and written by experts and could be approved and implemented with little more expense than new signage and road paint.

I recommend another email to members requesting a mass communication effort to lobby councilors for their support. Be sure to include the things that work: a form letter with space for personal comments and addresses for all members of city council.

Congratulations on this terrific bylaw review.

<name redacted for privacy>

Comment #11

Hello,

I fully endorse the recommendations put forth by Saskatoon Cycles to the City of Saskatoon. Let's get past this enforcement item and move on to the real business of building best practice cycling infrastructure in the city. When cycling advocates have to ask for exceptions to using cycling infrastructure because it is unsafe for any reason, we have all failed to make progress.

<name redacted for privacy>

Comment #12

I am in favour of the new bylaws. They are professionally done and well researched. I especially liked the recommendation to think of new laws for bicycles in sidewalks. As a winter cyclist I find myself often choosing sidewalks when road conditions are hazardous. On a number of occasions I have been stopped by police to remind me of the bylaw. Yet they never give me a

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ticket. It feels like the police are not very in favour of policing this issue of winter bikes on Sidewalks.

Keep up the good work,

<name redacted for privacy>

Comment #13

Looks great. Thanks for taking this on. I read the proposal, and for what it's worth I don't see any issues with it.

<name redacted for privacy>

Comment #14

Thanks so much for the work on this draft. This addresses all of my concerns on the current bylaws, where some of the provisions outdated, often confusing, dangerous, or impractical. I helps bring clarity and a sense of practicality and responsibility to cyclists, car drivers, and the city that builds and maintains roadways for all types of transportation.

I am in full support of this draft.

Sincerely,

<name redacted for privacy>

Comment #15

I would submit that we do as portland does—tickets the wild cyclists on sidewalks. The rest are good to go.

Under 12 should not be a stipulation—adults need to be safe as well.

1 meter is not nearly enough—I suggest 2.

Bells are useless—I find that 90% of the people can't hear them.

Keep up the good work. I agree about not having to ride on the dedicated lanes—they are almost always in poor shape.

<name redacted for privacy>

Comment #16

In the bylaw review bell, practical issue:

You state road and triathlon cyclists have bikes that are as light as possible and don't want to encumber their bikes with a bell. The weight of a bell is negligible with respect to the cyclists and bike. The argument is a red herring and makes the cyclists look petty. The practical problem is a bell does not mount on a road bicycle or triathlon bicycle in a manner that makes it readily accessible when the cyclist is holding the handle bars.

Bikes like BMX and mountain don't need them due to not interacting with pedestrians. They can be incredibly easily be shot down. BMX bikes require bells at all times unless inside a BMX/Skate park. Mountain bikes are typically ridden to the trails. And runners can be on the trails.

Suggestion - Cyclists on shared use trails are required to yield to pedestrians. Cyclists shall make reasonable attempts to warn pedestrians prior to passing the pedestrian. Cyclists passing pedestrians with less than 2m clearance shall slow to 15kph. Note this applies around tight corners. Cyclists need to slow before corners they cannot see around.

Another note. The City should put a speed limit by the train bridge East side of the river along the trail.

You mention significant number of dooring - do you have statistics to capture that? (You are talking in vague terms, hard numbers strengthen the argument).

Other problem with the partial share use. Some motorists see the signs on the bridges saying cyclists need to yield to pedestrians and assume it means cyclists are not allowed on the road. Cyclists are allowed on the road on Broadway bridge, University bridge,...

Stunting - stunting should be prohibited except for a designated areas (ie BMX/skateboard parks). Skateboards and roller blades and bicycles should be limited if the operator does not have good control of the device the device. (I nearly hit a skateboard somebody lost control of and sent flying in front of me).

Loads. I like Oregon's rule. It requires full control of the bike. I would like it to say the cyclists should have 2 hands on the handle bars at most times.

Dismount to pass a pedestrian. What if the pedestrian is a runner and the cyclists is wearing cycling shoes with cleats. The cyclist will not be able to walk faster than the pedestrian. The rule is not thought out at all.

<name redacted for privacy>

Comment #17

Congratulations to Saskatoon Cycles re the recommendations to revise local cycling bylaws. The SC response is professional and impressively thorough and provides solutions that are reasonable and easy to implement. Well done. Hopefully the City of Saskatoon sees it this way too.

Wouldn't it be nice if all motorists and cyclists and pedestrians were more tolerant of each other?

<name redacted for privacy> (road biker and 12 month/yr commuter cyclist)

PS

In my experience the city does a great job of keeping the bike/pedestrian paths snow free, particularly the one I regularly use along 14th Street. They deserve recognition for this.

Comment #18

Dear Sir/Madam:

- A. Agree that requirement for mandatory bell/horn should be removed.
- B. Position on street: I like the quoted Ohio traffic law statement. The one-metre minimum passing requirement should be made mandatory and punishable (preferably in Provincial Law), which in effect would make it impossible for a vehicle to pass a bicycle within the lane (regardless of where the bike is positioned)! I often prefer to 'take the lane', especially the right lane on a multi-lane street and the left lane when turning left, and hope to expressly retain that right. I would also like to see it expressly permissible to ride two abreast within a lane. Good cycling manners suggest that undue blocking of other traffic is uncool. On the highway, self-preservation suggests riding as far right as practicable.

C. Where to ride should essentially be a speed issue. Riding slower than 5 km/hr should always be permissible on the sidewalk, while riding 5-25 km/hr could be on the bike lanes, and over 25 km/hr should be on the street. Since sidewalks must be safe for pedestrians and bikes can cause injury, cyclists must exercise caution on the sidewalk and shared paths. Riding on an empty sidewalk should always be permissible (while keeping in mind that people can suddenly appear from adjacent doorways and cross streets).

D. Stunting is an excellent way of improving one's cycling skills both on and off the street -- but not in traffic of course.

E. Unlimited passengers and freight should be allowed on any bike, keeping in mind that the RIDER (bike operator) is at all times RESPONSIBLE for the condition and performance of the bike, for the safety of the cargo (human and otherwise) and for innocent bystanders. Do also note that in The Netherlands several people ride casually on a bike with or without special seats (See 'Utrecht summer cycling 2014' on YouTube:

<https://www.youtube.com/watch?v=B3smPA17D8M>), and in San Francisco The Companion Bike Seat Company makes bike seats for adult passengers (<http://www.thebikeseat.com>), which thus accommodate two adults on a bike (<http://www.thebikeseat.com/contact.html>), so the practise might be legal there.

F. Loads. See above

G. Since cycles are classified as vehicles in law, they should always have the legal right to be on the street. See also my comments in 'C': Riding faster than 25-30 km/hr on a bike lane is unsafe for everyone, so these riders should ALWAYS be on the street. Slower riders should be encouraged to ride on the bike lanes for their own safety.

Perhaps the new Bicycle Bylaw should be very simple by containing very few mandatory rules and instead provide some guidance regarding desired outcomes and perhaps some suggestions and caution regarding behaviour.

Sincerely,

<name redacted for privacy>

Recommendation #1 (remove requirement for use of bell or horn)

- Concern expressed over theft of bells
- Passing slowly and with deference to pedestrians is more important
- Concern expressed over blind corners along Meewasin Trail
- It is enough that one must yield to pedestrians
- Concern expressed over design issues on Meewasin Trail and Train Bridge
- Use of bell should be an option
- A person's voice is less startling than a bell
- Education on bicycle courteousness is more appropriate
- Start education early; in Winnipeg they learn about cycling in Grade 4
- There is a double standard here and bicycles are not treated as equals on the roadway; you would not ask cars to honk whenever passing

Recommendation #2 (remove requirement to stay right)

- People on bikes have the legal right to bike down the centre of the lane
- People on bikes often need to "own the lane" or "take the lane" to ensure safety
- The *Highway Traffic Act* allows for people on bikes to be treated like any other road user
- People on bikes should be treated the same as any other slow moving vehicle

Recommendation #3 (implement mandatory passing distance)

- City buses are the worst for this
- A minimum passing distance indicates respect for people's right to bike on the road

Recommendation #4 (remove blanket prohibition against sidewalk cycling)

- There should be no riding on sidewalks even for children
- This is confusing on 14th and the ramp onto College Drive
- In many places the signage about shared use sidewalks is too high to be seen
- Concern expressed over sidewalks with driveways
- It is absurd to expect people to walk their bikes

Recommendation #5 (remove prohibition against stunting)

- Should simply specify no stunting when on the roadway
- Should more generally state that a bicycle must be operated in a safe fashion
- Concern expressed over inconsistent application of restrictions on stunting

Recommendation #7 (remove load restriction)

- Concern expressed that load restrictions would have differential impact on economically marginalized people who rely on bikes for activities such as collecting recyclables for refund

Recommendation #8 (remove requirement to use cycling lanes)

- The safety issue needs to be clarified as the city needs to keep these in safe condition
- The city needs to design and maintain lanes that people want to use rather than trying to force people into lanes they do not feel comfortable or safe in

Other miscellaneous comments

- The city should turn its mind to how the Bicycle Bylaw might interact with electric bikes and should leave options available for future technology changes
- The city should consider making “Idaho stops” legal as drivers in Saskatoon often expect people on bikes to do an Idaho stop rather than a full stop at a stop sign anyway
- The rule allowing for people to ride two abreast should be clarified as the language is currently confusing
- Lights should be part of education rather than made mandatory
- At night both a headlight and a rear light should be mandatory, rather than just a rear reflector
- An overall approach of “education and not legislation” should be adopted

WALKING SASKATOON (WS)



WALKING SASKATOON

**Submission
to the
City of Saskatoon
regarding
Bylaw No. 6884,
“The Bicycle Bylaw”**

May, 2018

About Walking Saskatoon

Walking Saskatoon was formed in 2016 to advocate on behalf of pedestrians on issues that affect their safety and enjoyment in walking the neighbourhoods of Saskatoon. Through meetings and social media¹, the group provides a forum for expressing concerns, sharing information, identifying relevant research, and proposing ideas that would enhance the walking experience. On the basis of these activities, Walking Saskatoon has also undertaken to represent the interests of pedestrians at events and on committees related to city planning, regulation and development, advocating on behalf of all pedestrians walking for a wide variety of purposes in all parts of the city. Currently Walking Saskatoon is in the process of incorporating as a non-profit organization.

The Need for a Bicycle Bylaw Update

There are now more cars in Saskatoon than there are people², and the number of people using bicycles and other wheeled conveyances is also growing. Since much of our transportation infrastructure was not designed for these numbers, one unintended consequence of Saskatoon's growth is the potential erosion of the comfort and safety of pedestrians. In the view of Walking Saskatoon, people of all ages and abilities should be able to feel secure as they walk along the streets of our city. Yet not only do pedestrians face increasing risks as they interact with car and bicycle traffic in crossing roadways, they now spend more time walking on designated shared pathways that may lack the optimal size, design and conditions to accommodate a large volume of cyclists and pedestrians. One need only look at the current unhealthy trend towards limiting the independent mobility of children³ to suspect that today's walking conditions are sometimes a deterrent to active transportation for many Saskatoon citizens, particularly those who are very young⁴, very old, disabled or frail⁵.

It is hard for Walking Saskatoon to quarrel with any measure that improves the safety of cyclists, who are undoubtedly at grave risk of collision with cars when riding on roadways. Nevertheless, we must point out that reliance on shared pathways puts pedestrians at greater risk of collision with cyclists, and perhaps just as important, has been known to create frustration and conflict between the two groups.⁶ In worst case scenarios, shared pathways have created pedestrian-cyclist conflict to the extent that they are less effective in encouraging active transportation.⁷

Ideally, the City of Saskatoon will work towards the provision of complete streets that will appropriately separate car traffic, cyclists and pedestrians⁸. Each mode of transportation has its own needs, and given the differences between cars, cyclists and pedestrians in terms of speed and range, they are generally safest and happiest when using spaces that are designed specifically for them⁹. However, we do not live in an ideal world, and Walking Saskatoon recognizes that today's shared pathways are a reality that is likely to dominate walking in Saskatoon for the foreseeable future.

If pedestrians and cyclists are to continue sharing spaces that are sometimes less than ideal, and if the volume of pedestrian and cycle traffic continues to grow, it is vital that adequate regulations, policies and educational programs be in place to guide the behaviour of those using shared pathways¹⁰. An update to Bylaw 6884 is clearly needed to lay out the rights and responsibilities of cyclists with respect to pedestrians. Moreover, the update must be followed by an educational initiative that ensures pedestrians and cyclists have the same knowledge and expectations from which to operate.

Provisions of Concern in Bylaw 6884

1. Passengers and Loads

Section 11 on Passengers and Section 12 on Loads are primarily concerned with ensuring that cycles are properly designed and equipped to operate safely under full control of the cyclist. The wide range of cycles now available offers many cycles that are able to convey passengers and loads safely even though they exceed the weight, width and other limitations imposed by Sections 11 and 12. It is reasonable, therefore, to relax the limitations and allow the use of new cycles designed to carry passengers and loads.

Having said that, however, it should be pointed out that one factor determining the potential for collisions between cyclists and pedestrians on shared pathways is the size of the path. Some converted sidewalks and foot paths are not ideal for shared use, providing little room for cyclists to pass or overtake other cyclists or pedestrians. Especially in Saskatoon, where pathways may be at least partially covered with snow, ice, water or sand, depending on the season, it can be difficult for pedestrians to make way for a large bicycle even when given due warning that they are about to be passed or overtaken. Being passed too close for comfort is a problem for pedestrians¹¹. When larger cycles carrying cargo or passengers appear on the pathways in greater numbers, this problem may be exacerbated. Cyclists riding such large cycles may be able to choose their routes to avoid narrow pathways, but if not, they may need to negotiate with pedestrians in order to get around them without creating discomfort, even dismounting in some circumstances.

2. Parks

Section 2 of Bylaw 6884 does not provide a definition of a “shared pathway” or “multi-use pathway.” It is left to Sections 14-19 on Parks, where these pathways are in use, to indicate how bicycles are expected to operate on shared pathways. Not all shared pathways are in parks, however, and there is a need for both cyclists and pedestrians to be

clear about expected behaviours at all times. An argument can therefore be made that the provisions regulating cyclist behaviour under Parks should be more explicitly applied to all pathways that have been designated with signs as “shared” or “multi-use.”

Although the park pathways and designated shared pathways are understood to be shared by cyclists and pedestrians, it is necessary to specify, as in Section 16, that cyclists shall yield to pedestrians. A cyclist moving at speed and colliding with a pedestrian can inflict injuries similar to those created in car-cyclist collisions¹². The onus must always be on cyclists to be aware of the danger they represent and moderate their speed to safe levels, not only when passing or overtaking other cyclists or pedestrians, but as a general rule.

It needs to be remembered that pedestrians include people of all ages and abilities, and they are often using pathways for recreational purposes. It should not surprise cyclists when they find groups of pedestrians on the pathway, e.g., an extended family on a walk or a day care group on an excursion. They may also encounter children playing or dogs whose behaviour is unpredictable; and they will frequently be passing people who are elderly, deaf, or have mobility problems. In addition, some encounters with pedestrians will inevitably occur on blind corners, intersections and driveways. If cyclists neglect to give pedestrians due consideration by riding shared pathways at appropriately moderate speeds, the potential for falls and collisions due to unforeseen circumstances increases markedly. Commuter or sports cycling, which can involve speeds of 25-50 km per hour¹³, is not appropriate on shared pathways used for recreation by pedestrians.

It may be time to go beyond the admonition to use “due care and attention” in Section 15 and the prohibition of an “immoderate rate of speed” in Section 19. Some researchers believe that cycling speeds on shared pathways should be no more than 10 km per hour to ensure pedestrian safety¹⁴. Efforts to set speed limits for cyclists are generally unenforceable, however, since there is no adequate way of measuring the speed of cycles, cycles are not equipped with speed indicators, the speed tolerance for shared pathways varies according to place and time of day, and cyclists tend to ignore signs posting speed limits anyway¹⁵. As a result, Walking Saskatoon does not recommend cycling speed limits in Saskatoon. Nevertheless, it does ask that the updated bylaw clearly communicate that pedestrians have priority on shared pathways so that the cycling community understands its responsibility to self-regulate cycling speeds to reflect that priority.

3. Use of horn or bell

Section 6 of Bylaw 6884 states that bicycles should be equipped with a horn or bell capable of emitting a sound for at least 35 metres. This section recognizes the inherent danger of collision when cyclists on a shared pathway pass or overtake pedestrians

without warning. The danger increases on blind corners and is greater if the cyclist is moving at higher speeds. In all situations, it is the responsibility of the cyclist to warn pedestrians a reasonable amount of time before passing or overtaking and to wait until the way is clear. What is a reasonable amount of time may differ according to the circumstances. Moreover, cyclists need to keep in mind that even an audible warning may not always suffice since pedestrians include people who are hard of hearing, particularly when there is a lot of background noise from traffic, crowds or the weather.

Ultimately, the way that a warning is given is less important than the obligation of cyclists to negotiate shared pathways in a way that ensures pedestrians are not startled, intimidated or harmed. Either the “yell” or the “bell” will work in giving an audible warning. Nevertheless, there may be merit in choosing a standardized sound that is immediately recognizable as a warning signal and promoting its use by all but a few cyclists who may be exempted, e.g., road or triathlon cyclists.

4. Sidewalks

Section 8 of Bylaw 6884 requires cyclists to use the roadway and thus prohibits cycling on sidewalks. We recognize that in Saskatoon, weather, water main breaks, road construction, accidents, and a multitude of other circumstances can render a road, bike lane or sidewalk hazardous or impassable at short notice. Under adverse circumstances that render the roadway or bike lane unsafe, it is reasonable for cyclists to ride on the sidewalk provided they proceed at pedestrian-friendly speed and give way to pedestrians.

Cyclists are most likely to ride on sidewalks when road cycling is poor¹⁶, perhaps due to winter conditions or the close proximity of cars. The emphasis therefore needs to be on making the roadways safe and comfortable for cyclists rather than divert those who are uncomfortable onto the sidewalks.

It is never appropriate for cyclists to use the sidewalk as an alternate route to the roadway or bike lane in order to maintain the highest possible speed or beat the traffic. Cyclists who abruptly leave the curb to ride on the road or bike lane, who move quickly onto sidewalks to take advantage of pedestrian walk lights, or who speed past driveways and building exits that are not designed for anyone moving past them that fast are engaging in dangerous behaviour. Such cyclists need to understand the multi-purpose nature of sidewalks and the multitude of unpredictable, potentially hazardous events that can occur there for anyone moving faster than pedestrian speed.

There is currently a problem for both pedestrians and cyclists in understanding where some sidewalks become a shared pathway and then stop being shared. Appropriate signage may help to alleviate that problem.

Each year about 50,000 children in Canada are injured in bike-related injuries, and children aged 5-14 account for about half of deaths from cycling injuries¹⁷. It is known that the brains of children under 14 are not yet capable of allowing them to operate bicycles in the complex environment provided by roadways and bike lanes¹⁸. At the same time, it is important to habituate children as early as possible to the advantages of active transportation, which include better health and closer connections within families and communities¹⁹. To encourage children to walk and cycle, an exception should be made to the prohibition against cycling on sidewalks to allow children under the age of 14 to ride on them while learning how to operate a bicycle safely. Special consideration should also be given to the needs of adult cyclists who supervise child cyclists while they are learning.

5. Bridges

Sections 20 and 21 allow cyclists to use the sidewalk portion of bridges, treating them much like shared pathways although cyclists are required to dismount and walk their cycles past pedestrians whom they are overtaking. This permission for cyclists to use bridge sidewalks reflects the importance of these routes crossing the river, which are used frequently by cars, buses, cyclists and pedestrians.

Unfortunately, not all of Saskatoon's bridges have sidewalks that were designed as shared pathways. The sidewalks on the University, Broadway and Sid Buckwold bridges are on the narrow side, and in seasons of the year when snow, ice, rain water or gravel accumulate on the sidewalks, they are narrowed even more. At times it is just barely possible for a cyclist to ride past a pedestrian, and many pedestrians would be uncomfortable with the closeness of the encounter. Some feel obliged to stop walking and move up against the bridge railing until the cyclist has gone by. Moreover, it should be noted that traffic can be heavy and steady on these bridge sidewalks, necessitating frequent meetings between pedestrians and cyclists.

Cyclists see no problem in taking charge of a lane on the roadway and expecting cars to follow them until it is safe to overtake them. In the same way, it is not unreasonable for pedestrians to expect cyclists on sidewalks to dismount and negotiate a way around them that is not too close for their comfort and safety. Although experience has shown that making it mandatory for cyclists to dismount tends to be another unenforceable regulation that cyclists often ignore²⁰, there may still be merit in reinforcing in bylaw the responsibility of cyclists to dismount rather than risk intimidating pedestrians by passing too close.

Recommendations from Walking Saskatoon

1. The heading for Sections 14-19 should be changed to indicate that these provisions apply to shared pathways as well as parks.
2. On shared pathways a cyclist shall either dismount to cross intersections on pedestrian crosswalks or approach and ride across them at pedestrian speed.
3. Any cyclist on a shared pathway shall alert anyone about to be overtaken with an audible warning a reasonable amount of time before overtaking, and any cyclist approaching a blind corner on a shared pathway shall alert anyone around the corner with an audible warning a reasonable amount of time before turning the corner.
4. A person shall not ride a bicycle on a sidewalk except where:
 - a. The sidewalk has been designated by signs as a shared pathway;
 - b. The roadway or bike lane that the cyclist is expected to ride has become unsafe and the cyclist is proceeding at pedestrian speed; or
 - c. The cyclist is a child under the age of 14.
5. When passing or overtaking pedestrians on sidewalks or shared pathways, including those on bridges, cyclists who might startle or intimidate the pedestrians due to large loads or narrow passing room, shall dismount and negotiate a safe way around the pedestrians.

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SASKATOON AND DISTRICT SAFETY COUNCIL (SDSC)



THE Saskatoon and District Safety Council has undertaken to review the Project Report Draft Bicycle Bylaw Components & Discussion from our point of view as expressed earlier "Saskatoon and District Safety Council Stressed need for conformity with TSA".

We thank the author for an in depth look at the present status and as well as presenting ideas for updating the bylaws related to bicycles in Saskatoon.

Again, we stress the point of view of our
STAKEHOLDER ENGAGEMENT

Saskatoon and District Safety Council Stressed need for conformity with TSA

DEFINITIONS

Problem areas:

1) "Bicycle" means any muscular propelled, chain-driven wheeled device in, on, or by which a person is or may be transported or drawn.

a) By definition bicycle means "two" and we have three wheels on pedaled vehicles used by many seniors.

b) There are belt driven bicycles as well as chain driven.

OPERATION

12) must give a signal by hand and arm prior to turning in the following manner: a) when making a left-hand turn, by extending the left arm horizontally. b) when making a right-hand turn, by extending the left arm bent vertically upwards, **or by extending the right arm horizontally**

Using the right arm contravenes the Traffic Safety Act Section 234(2)(b) **to turn right, to turn out to the right from a stationary position at the side of the highway or to drive to the right from one traffic lane to another, by extending the driver's left arm from the shoulder to the elbow horizontally and from the elbow to the hand vertically upwards;**



BRIDGES

In traversing any bridge or river crossing, a person operating a bicycle may: 1) use that portion of the bridge or river crossing as is intended for the passage of motor vehicles; or, 2) use the sidewalk portion of any bridge or river crossing as a Shared-Use Path.

I am very concerned about the plan to allow bicycles to use the regular traffic lanes on all of the city bridges with the exception of the ones on Schedule A. If they go ahead with this, I can see at the least significant traffic problems on those bridges and at worst, injuries or deaths of cyclists in heavy traffic.

Nowhere do I see anything about obstruction of traffic where a cyclist decides to use a traffic lane instead of a bicycle lane or shared pathway.

Submitted by (name withheld for privacy reasons).

6 CYCLE TRACKS

A person using a Motorized Mobility Aid (MMA) may use a cycle track if the rules of the road and this bylaw are followed.

As a Motorized Mobility Aids are considered extensions of the pedestrian, they are to travel on the left of the highway facing traffic and as such they would be in contravention of the TSA if they are travelling on the right. As many of these MMA are difficult to control when they are using the sidewalk and come to an alley which is sloped toward the street, the riders prefer travelling on the street facing traffic.

Section 228(1) of the provincial Traffic Safety Act addresses the rules of the road regarding traffic lanes: Page 26 Draft Bylaw states:

Motorists do, however, overtake people cycling while in the same lane. The TSA stipulates that cyclists ride as "close as is reasonably practicable to the right hand curb" so as to allow people driving to pass.

After checking The Traffic Safety Act we were unable to find the above quote. A request was made to the author of the Draft Bylaw to clarify from where in the Traffic Safety Act the quote was taken. At this time no response has been received.

Unfortunately as no response has been received answering our request, we can only assume that the author has not had time to reply. It would be difficult to believe that the quote is not true.



7 MOTORIST OVERTAKING A PERSON RIDING A BICYCLE

Every person in charge of a motor vehicle who is overtaking a person travelling on a bicycle on a street with one traffic lane in the direction of travel, shall, as nearly as may be practicable, leave a distance of not less than one meter between the bicycle and the motor vehicle and shall maintain that distance until safely past the bicycle. The one-meter distance required refers to the distance between the extreme right side of the motor vehicle and the extreme left side of the bicycle, including all projections and attachments.

*As a bicycle is a vehicle(non-motorized), it is entitled to use the highway, there fore, the driver is entitled to the lane in which it is travelling. To place a one - metre minimum distance from the bicycle is much too small. Being passed by a transit bus or semi- trailer at 60 kph **with only 1 metre of space is not safe.***

SIDE-BY-SIDE COMPARISON: NEW & CURRENT

12) must give a signal by hand and arm prior to turning in the following manner: a) when making a left-hand turn, by extending the left arm horizontally. b) when making a right-hand turn, by extending the left arm bent vertically upwards, or by **extending the right arm horizontally.**

Already mentioned as contravening Traffic Safety Act.;

Power-assisted Bicycle

247(1) No person shall drive a power-assisted bicycle on a highway unless: (a) that person is 14 years of age or older; (b) that person and any passenger are wearing, in the prescribed manner, a helmet that meets the prescribed specifications; and (c) the power-assisted bicycle meets the prescribed equipment and safety standards required for the operation of that power-assisted bicycle.



HELMETS

11 HELMETS Proposed Bylaw: • None, but the City will continue to recommend helmet use by all cyclists and passengers and encourage provincial legislation for cyclists under 18 years of age.

Although the Saskatoon and District Safety Council made no mention of Helmet use in our Stakeholder Engagement, we must emphasize that from a point of SAFETY the use of helmets for all cyclists should be mandatory. **As stated by many of the other Stakeholders, Saskatoon could be a shining light in making helmet use mandatory.**

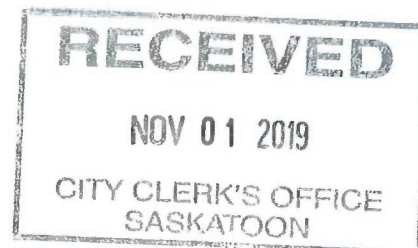
Section 247 of the provincial Traffic Safety Act addresses the rules regarding power assisted bicycles: 247(1) No person shall drive a power-assisted bicycle on a highway unless: (a) that person is 14 years of age or older; **(b) that person and any passenger are wearing, in the prescribed manner, a helmet that meets the prescribed specifications;** and (c) the power-assisted bicycle meets the prescribed equipment and safety standards required for the operation of that power-assisted bicycle.

As helmets are necessary for power assisted bicycles (see above) then it seems obvious that all cyclists should wear a helmet. The members of the bicycle patrol of the Saskatoon Police Service wear helmets for their own protection.

The above information has been submitted
by members of the Saskatoon and District Safety Council
and compiled by:

Al Reichert
Traffic Committee Chair
Saskatoon and District Safety Council
September 18, 2019

From: Benjamin Ralston <[REDACTED]>
Sent: Friday, November 1, 2019 3:45 PM
To: City Council
Subject: Form submission from: Write a Letter to Council
Attachments: ltr_ralston_2019-11-01.pdf



Submitted on Friday, November 1, 2019 - 15:44

Submitted by anonymous user: 128.233.10.39

Submitted values are:

Date Friday, November 01, 2019

To His Worship the Mayor and Members of City Council

First Name Benjamin

Last Name Ralston

Email [REDACTED]

Address [REDACTED] Avenue E South

City Saskatoon

Province Saskatchewan

Postal Code S7M [REDACTED]

Name of the organization or agency you are representing (if applicable)

Subject Bicycle Bylaw Update - Proposed Revisions

Meeting (if known) SPC on Transportation (November 4, 2019)

Comments

I am not able to attend the upcoming meeting of the Standing Policy Committee on Transportation in person so I have prepared a short written submission in support of Ms. Melchiorre's August 2019 Project Report in the attached letter.

Attachments

ltr_ralston_2019-11-01.pdf

The results of this submission may be viewed at:

<https://www.saskatoon.ca/node/398/submission/347166>



Benjamin Ralston
[REDACTED] Avenue E South
Saskatoon SK S7M [REDACTED]

November 1, 2019

Office of the City Clerk
222 3rd Avenue North
Saskatoon SK S7K 0J5

Re: November 4th Agenda Item: Bicycle Bylaw Update – Proposed Revisions

Dear Members of the Standing Policy Committee on Transportation:

I write to express my enthusiastic and unqualified support for the recommendations set out within the August 2019 Project Report prepared by Ms. Marina Melchiorre regarding an update to the City of Saskatoon's Cycling Bylaw.

I assisted Saskatoon Cycles with its own submissions in support of reform to the existing Cycling Bylaw. Among other things, I supervised the initial research of a law student (Mr. Scott Silver) on this project, I supplemented Mr. Silver's work, I prepared a full draft submission from it, and I assisted during a consultation process with the Saskatoon Cycles' members to elicit further input. The final product is an attachment to Ms. Melchiorre's own detailed report. Several of Saskatoon Cycles' recommendations to the City are not reflected in Ms. Melchiorre's report and I still stand behind the recommendations on behalf of Saskatoon Cycles and the painstaking research on which they were based.

Nevertheless, I wish to wholly endorse Ms. Melchiorre's own report as it proposes balanced and politically feasible recommendations for updates to a bylaw that is out-of-date, confusing, and illogical in many respects. The length of Ms. Melchiorre's report reflects the depth of reflection, research, and community engagement that went into its preparation. Most of its proposed amendments are dictated by basic common sense and should provoke little controversy from the public. However, two of its most significant elements do appear to be eliciting some level of controversy so I wish to address them in detail with the remainder of this submission.

One-meter minimum passing distance

The inclusion of a one-meter passing distance in the proposed amendments appears to be one of its more controversial recommendations. Yet this clearly falls in line with the best practices that have emerged in North America and internationally. In the Saskatoon Cycles submission it was pointed out that a majority of states in the US (28) had put in place legislated minimum passing distances of two feet or greater at the time of writing. It appears that minimum passing distances of three feet or greater are now legislated in at least 32 states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi,

Nebraska, Nevada, New Hampshire, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Virginia, Utah, West Virginia, Wisconsin, Wyoming, and DC.

The Saskatoon Cycles submission also pointed out that either the same (one-meter) or a greater minimum passing distance had been legislated by most states in Australia, as well as several countries in Europe. Yet in Canada, only Ontario and Nova Scotia had legislated minimum passing distances when the Saskatoon Cycles submission was being researched and drafted. I wish to point out that a legislated minimum passing distance of one meter or more now exists in a majority of Canadian provinces: namely, Ontario, Quebec, Nova Scotia, Prince Edward Island, New Brunswick, and Newfoundland and Labrador. The City of Calgary has also very recently implemented the same minimum passing distance.

There is good reason for such a rapid adoption of a minimum passing distance across the globe. Motorists have been found to be at fault in the majority of bicycle-motor vehicle crashes (57%), passing too closely is the most common incident type (40.7%), and studies in the UK and Australia have found that 13-15% of all fatal bicycle crashes involved motorist sideswipes (see Debnath et al, "Factors influencing noncompliance with bicycle passing distance laws" (2018) 115 *Accident Analysis and Prevention* 137 at 137). The City of Saskatoon can feel confident that making this amendment will not only reflect a best practice, it may well save lives.

It is also important to bear in mind that this amendment is best characterized as a *clarification* of the law rather than the imposition of some radical new requirement on those operating motor vehicles in Saskatoon. Provincial law already prohibits driving a vehicle "without reasonable consideration for other persons" (see section 44(2) of *The Highway Traffic Act, 1996*). Motorists can already be charged if they overtake a cyclist at an unsafe distance on the basis that doing so amounts to driving without reasonable consideration for others (see for example *R v Perret*, 2016-12-01SCPPerretJ (Sask. Prov. Ct.) [unreported]). And in jurisdictions where a minimum passing distance has yet to be legislated, insurance bodies still often refer to this same distance in their guidance to drivers (see for example, Manitoba Public Insurance, "Motorists encouraged to leave one-meter distance when passing a cyclist" (22 June 2017): <<https://www.mpi.mb.ca/Pages/nr2017june22.aspx>>). At this time, it cannot be said with any certainty that overtaking cyclists with less than one-meter of clearance in Saskatoon is in fact legal. Legislating a minimum one-meter passing distance will make it clearer for all road users that it is *not* legal.

No mandatory helmet provision

Another aspect of Ms. Melchiorre's report that may be controversial is the absence of any recommendation in support of making helmet use mandatory for adults. I wish to quickly outline a few key reasons why I think the City of Saskatoon should accept this position and not make helmet use mandatory in this bylaw.

First of all, several studies have indicated that mandatory helmet laws may not be effective at reducing head injuries (see for example: Kay Teschke et al, "Bicycling injury hospitalisation rates in Canadian jurisdictions: Analyses examining associations with helmet legislation and mode share" (2015) *BMJ Open* 5; Jessica Dennis et al, "Helmet legislation and admissions to hospital for cycling related head injuries in Canadian provinces and territories: Interrupted time series analysis" (2013) *BMJ Open* 346; Sara Markowitz & Pinka Chatterji, "Effects of bicycle helmet laws on children's injuries" (2015) *Health Economics* 24).

Second, there is evidence to suggest mandatory helmet laws can discourage cycling (see Christopher Carpenter & Mark Stehr, "Intended and unintended consequences of youth bicycle helmet laws" (2011) 54:2 *Journal of Law and Economics* 305). They may be promoting an unjustified impression that cycling is dangerous when we may well face a greater statistical risk of injury when climbing a ladder or getting into a bath (see Elizabeth Rosenthal, "To Encourage Biking, Cities Lose the Helmets" (29 September 2012) *New York Times*). This in turn can mean that even if such a law is effective at decreasing rates of head injuries, it can also decrease physical activity levels so as to eliminate any net public health benefit (see Piet de Jong, "The Health Impact of Mandatory Bicycle Helmet Laws" (2012) *Risk Analysis* 32).

Third, an emphasis on helmet use can be seen as "victim-blaming" and a distraction from more evidence-based approaches to improving cycling safety such as the creation of integrated networks of cycling infrastructure. For example, one recent publication likens the "helmet fixation" in North America to a debate over whether making bullet-proof vests mandatory for city-dwellers would reduce the severity of gun violence in US cities. While such a mandatory vest law could very well reduce deaths and serious injuries, "this would implicitly accept gun violence as inevitable, rather than seeking to stop people from being shot in the first place" (Greg Culver, "Bike helmets – a dangerous fixation? On the bike helmet's place in the cycling safety discourse in the United States" (2018) *Applied Mobilities*).

Fourth, there is some evidence to suggest that helmet use communicates a false sense of security to cyclists and drivers alike, causing the former to engage in riskier behaviours on their bikes and the latter to engage in riskier behaviour when overtaking cyclists on the road. According to one commentator, this may be why a compulsory helmet policy in Australia (which has since been abandoned) led to a dramatic *increase* in cycling injury rates (see David Pimentel, "Cycling, Safety, and Victim-Blaming: Towards a Coherent Public Policy for Bicycling in 21st Century America (2018) 85 *Tennessee Law Review* 753 ["Pimentel"] at 784-785).

Finally, mandatory helmet laws create financial and practical barriers to cycling in general, as well as specific programs like the bike-sharing facilities now available in major cities across the globe (see Pimentel at 783). This financial and practical barrier will be of particular concern to low income residents of Saskatoon who rely on bicycles as a form of safe and affordable transportation.

With all due respect to those holding contrary views, I believe that Ms. Melchiorre's report strikes the right balance by recommending that helmet use be encouraged by the City but without making helmet use mandatory through an amendment to the Cycling Bylaw.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Ben Ralston", written in a cursive style.

Benjamin Ralston, BA, JD, LLM, PhD (candidate)

Subject: FW: SPC ON TRANSPORTATION - BICYCLE BYLAW - NOVEMBER 4, 2019
Attachments: D26749E8-78E0-465B-9D8E-994DD3B291B2.jpeg

From: Randy [<mailto:randy@riversdale.ca>]
Sent: November 04, 2019 7:28 AM
To: Web E-mail - City Clerks <City.Clerks@Saskatoon.ca>
Cc: 'Randy' <randy@riversdale.ca>; 'Riversdale Communications' <communications@riversdale.ca>
Subject: SPC ON TRANSPORTATION - BICYCLE BYLAW - NOVEMBER 4, 2019

GOOD MORNING CITY CLERKS STAFF:
WOULD YOU PLEASE INCLUDE THIS EMAIL FOR THE SPC ON TRANSPORTATION FOR THE 2:00 PM MEETING TODAY.

STANDING POLICY COMMITTEE ON TRANSPORTATION
MONDAY, NOVEMBER 4, 2019 AT 2:00 PM
7.2.1 BICYCLE BYLAW UPDATE
PROPOSED REVISIONS (FILES CK 5300-5-2, X6000-5)

**"REVIEW AND UPDATE BICYCLE
BYLAW NO. 6884 TO ENSURE THAT IT REFLECTS BEST PRACTICE."**

COULD CITY COUNCIL PROVIDE ASSURANCES THAT THE BEST PRACTICE BEING PROPOSED REGARDING ALLOWING BIKES BEING RIDDEN ON SIDEWALKS TO ALLOW PATRONS, SENIORS AND PEDESTRIANS IN THE RBID THE PREDICTABLE EXPECTATION OF EXITING DOORWAYS AND NOT BEING STRUCK BY SOMEONE, REGARDLESS OF AGE, ON A BICYCLE (OR SKATEBOARD) THAT CAN RESULT IN HARM AS WE ARE WITNESSING IN ADVANCE OF UPDATING BYLAW 6884.

**"RESERVATIONS WERE RAISED ABOUT SIDEWALK RIDING
RELATED TO NARROW INFRASTRUCTURE, COURTESY, AND INCREASING CYCLIST VOLUMES: HOWEVER, THE
PROPOSED REVISION WAS SUPPORTED."**

WHAT MEANS OF ENFORCEMENT WILL THE CITY IMPLEMENT TO ENSURE PEDESTRIANS ARE SAFE ON SIDEWALKS,
WHEN EXISTING EDUCATION EFFORTS ARE INSUFFICIENT AND POLICE ARE NOT ENFORCING WHAT ALREADY EXISTS?

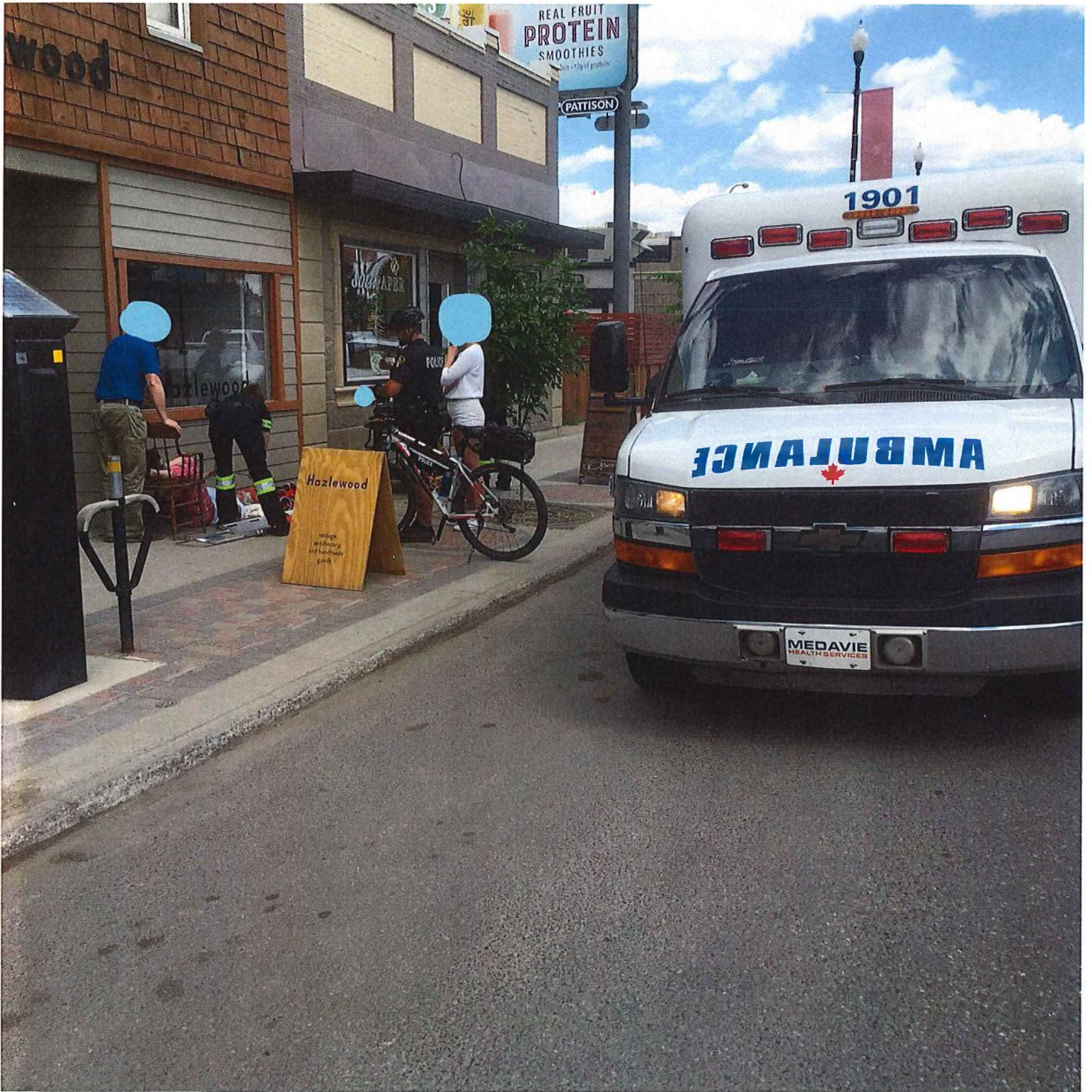
ATTACHED IS A PHOTO OF A SENIOR CITIZEN WHO EXITED A BUILDING IN THE 100 BLOCK OF 20TH STREET WEST, WAS STRUCK BY A YOUTH ON A BICYCLE, RESULTING IN KNOCKING HER DOWN AND BREAKING HER HIP. A SIMILAR INCIDENT HAPPENED WITH A CUSTOMER EXITING A BUSINESS IN THE 300 BLOCK OF 20TH STREET WEST, SUSTAINING INJURIES FROM BEING STRUCK BY SOMEONE ON A BICYCLE

THANK YOU,
RANDY PSHEBYLO

Randy Pshebylo, BDM, Executive Director
RIVERSDALE BUSINESS IMPROVEMENT DISTRICT
344 20th Street West, Saskatoon, SK, Canada, S7M 0X2
[Facebook](#) | [Twitter](#) | [Web](#) | P 306.242.2711 | F 306.242.3012



it's happening, be part of it!



Request for Budget Adjustment – Capital Project #2266 – Highway 16 and 71st Street Intersection Upgrades

ISSUE

This report provides information on the Administration's final review of Capital Project #2266 – Highway 16 and 71st Street Intersection Upgrades (Capital Project #2266) which resulted in a funding shortfall. The Administration is seeking approval for a budget adjustment of \$829,374.24.

RECOMMENDATION

That the Standing Policy Committee on Transportation recommend to City Council:

1. That \$224,000 of funding be returned to the reallocation pool from Capital Project #2405 – Idylwyld Drive and Circle Drive Interchange;
2. That \$260,000 of funding be returned to the Transportation Infrastructure Expansion Reserve from Capital Project #2428 – Functional Planning Studies; and
3. That the total of \$829,374.24 be allocated to Capital Project #2266 – Highway 16 and 71st Street Intersection Upgrades as follows:
 - a) \$44,374.24 from the Transportation Infrastructure Reserve;
 - b) \$455,000.00 from the Transportation Infrastructure Expansion Reserve;
 - c) \$106,000.00 from the Traffic Safety Reserve; and
 - d) \$224,000.00 from the Reallocation Funding Pool.

BACKGROUND

As part of the boundary alteration proposal approved by City Council, at its meeting held on June 23, 2014, the City of Saskatoon (City) took over responsibility for the intersection of Highway 16 and 71st Street including the RM of Corman Park's financial responsibility for improvements. City Council, at its meeting held on September 29, 2014, approved that the City enter into an agreement with the Ministry of Highways and Infrastructure to take over operational jurisdiction of Highway 16 from the current city limits up to and including the intersection of 71st Street. The project has previously received funding totalling \$5,670,000 to complete the improvements.

Construction was declared substantially complete in late May 2018. It was understood by the Administration that several partners were to participate in funding the project and every effort to collect was undertaken; however, the project has resulted in a deficit funding position of \$829,374.24.

DISCUSSION/ANALYSIS

The Administration has completed a comprehensive review of existing capital projects in order to identify projects that can have funding returned to source in order to offset the current deficit in Capital Project #2266. Approximately \$345,375 has been returned to

original source reserves as these projects have been completed and were in surplus positions.

In addition, the Administration has identified and recommended that Capital Project #2405 and #2428 return \$484,000 of funding to source to reallocate towards Capital Project #2266 deficit position. As these returns could be interpreted as a change in scope under Council Policy C03-036, Multi-Year Business Plan and Budget, City Council approval is being sought. An overview of the projects requiring City Council approval are outlined below.

Capital Project #2405 – Idylwyld Drive and Circle Drive Interchange

This project addressed anticipated adjustments of the Idylwyld Drive and Circle Drive interchange required due to completion of the Circle Drive South project. In 2011-2012, \$290,000 was provided from the Reallocation Pool and \$33,000 was provided from the Urban Connector Program. A functional planning study for this interchange was completed in 2012. This study indicated no immediate interim improvements were required; however, the Administration plans to review this interchange location again in consideration of a future interchange at Circle Drive and Airport Trail, and with a change in traffic patterns due to the existing Chief Mistawasis Bridge and future Saskatoon Freeway. This future review is planned in 2022 and would be funded by a future capital project.

Administration recommends that funding of \$224,000 be returned to the Reallocation Funding Pool (RFP) and the project closed.

Capital Project #2428 – Functional Planning Studies

This project is for ongoing identification of future transportation needs and the preparation of functional planning studies. In 2017, funding of \$200,000 was provided to complete the functional planning study of the Highway 16 and Highway 11 cloverleaf interchange. In 2018, funding of \$200,000 was provided to complete the functional planning study of Circle Drive between Clancy Drive and Laurier Drive. This work is ongoing and will be completed in late 2019. In 2019, funding of \$200,000 was provided with the intent of completing a functional planning study of Circle Drive from north of Laurier Drive to north of Airport Drive; however, this work will not start in 2019 due to staff capacity limits. The Administration plans on including \$200,000 for this project in the 2020 and 2021 budget; therefore, the Circle Drive from north of Laurier Drive to north of Airport Drive functional planning study will be completed in 2020.

Administration recommends that funding of \$260,000 be returned to the Transportation Infrastructure Expansion Reserve (TIER).

Capital Project #2266 – Highway 16 and 71st Street Intersection Upgrades

This capital project has a deficit funding position of \$829,374.24.

Request for Budget Adjustment – Capital Project #2266 – Highway 16 and 71st Street Intersection Upgrades

Administration recommends that:

1. Funding of \$44,374.24 be allocated from the Transportation Infrastructure Reserve (TIR);
2. Funding of \$455,000 be allocated from TIER;
3. Funding of \$106,000 be allocated from the Traffic Safety Reserve (TSR); and
4. Funding of \$224,000 be allocated from RFP to allow for closure of this project.

IMPLICATIONS

There is no overall net financial implication as the funding returned to source and recommended to be returned to source are equivalent to the allocation to Capital Project #2266 to cover the current shortfall. A summary of the financial implications are summarized in the table below:

Capital Project #	Details	Action	Amount
n/a	Existing Funding in TIR	n/a	(\$44,374.24)
n/a	Existing Funding in TIER	n/a	(\$195,000.00)
n/a	Existing Funding in TSR	n/a	(\$106,000.00)
2405	Idylwyld Drive and Circle Drive Interchange	Return to RFP	(\$224,000.00)
2428	Functional Planning Studies	Return to TIER	(\$260,000.00)
2266	Highway 16 and 71st Street Intersection Upgrades	Re-Allocate from TIR	\$44,374.24
		Re-Allocate from TIER	\$455,000.00
		Re-Allocate from TSR	\$106,000.00
		Re-Allocate from RFP	\$224,000.00
Resulting financial impact to programs or reserves			\$0.00

NEXT STEPS

Upon approval, the Administration will proceed with the transfer of funds and close the project.

Report Approval

Written by: Jay Magus, Director of Transportation

Reviewed by: Jason Turnbull, Senior Financial Business Partner, Corporate Financial Services

Approved by: Terry Schmidt, General Manager, Transportation & Construction Department

Admin Report - Hwy 16_71 St Intersection Upgrades-Request for Budget Adjustment.docx