# Saskatoon

## **Traffic Control Catalogue**

2018

## Contents

1	Spe	ed Limits	3
	1.1	Speed Limit Signs	3
	1.2	How You Can Take Action	3
	1.3	Things to Consider	4
2	Inte	rsection Controls	5
	2.1	Uncontrolled Intersections	5
	2.2	Yield Signs	5
	2.3	Stop Signs	5
	2.4	Roundabouts or Traffic Signals	6
	2.5	How You Can Take Action	6
	2.6	Things to Consider	6
	2.7	Our Service to You	7
3	Ped	estrian Crossings	8
	3.1	Unmarked Crosswalks	8
	3.2	Standard and Zebra Crosswalks	8
	3.3	Pedestrian Actuated Devices	9
	3.4	How You Can Take Action	.1
	3.5	Things to Consider	.1
	3.6	Our Service to You	.2
l i	st of	Figures	
		Speed limit signs	3
		Standard yield sign	5
Fi	gure 3:	Standard stop sign	6
Fi	gure 4:	Crosswalk pavement markings	9
Fi	gure 5:	Rectangular Rapid Flashing Beacons (RRFB)1	.0
		Active Pedestrian Corridor (APC)	
		Pedestrian Actuated Signal (PAS)	
,	_ ~ . ~ , .		

## 1 Speed Limits

Speed limits for the City of Saskatoon are outlined in Traffic Bylaw 7200. The majority of streets in the City have a 50 kph speed limit. Speed limits may vary from the 50 kph speed limit depending on a number of factors, such as road type, road classification, road geometry, land use, among others. School zones have a 30 kph speed limit effective from 8:00 am to 5:00 pm Monday to Friday, September to June.

## 1.1 Speed Limit Signs

Speed limit signs are used to indicate the legal speed limit on a roadway. When there is no posted speed limit sign, the legal speed limit defaults to 50 kph.

Speed limit signs are installed when the speed limit is higher or lower than the default speed limit of 50 kph. There are two types of speed limit signs:

- Maximum Speed Ahead These signs are used when the speed limit changes by more than 20 kph. A Maximum Speed Ahead sign is placed in advance of the first Maximum Speed Begins sign to provide drivers the time to adjust their speed before entering the new speed zone.
- Maximum Speed These signs are placed after each cross-street along a roadway to which
  the speed limit applies.



Figure 1: Speed limit signs

### 1.2 How You Can Take Action

To request a speed limit review or a speed limit sign, please call 306-975-2454 or email <a href="mailto:Transportation@saskatoon.ca">Transportation@saskatoon.ca</a>.

To report a damaged sign, please call Sign Shop at 306-975-2682.

To request speed enforcement or to report unsafe drivers, please call the Saskatoon Police Service at 306-975-8068.

## 1.3 Things to Consider

- Changing the speed limit of a roadway has little effect on the speed of drivers.
- Studies show that changes to roadway configuration are more effective in slowing driver speed than lowering speed limits.

## 2 Intersection Controls

The use of signs, traffic signals or crosswalks at intersections play a big part of ensuring motorist and pedestrian safety. Using input from residents and collected data, the Transportation division will assess and determine if any of these traffic management tools are required at a specific location.

## 2.1 Uncontrolled Intersections

Where there are no traffic control signs, the driver of a vehicle approaching an intersection must yield the right-of-way to any vehicle or pedestrian already in the intersection. When two vehicles approach an intersection from different streets or highways at approximately the same time, the right-of-way rule requires the driver of the vehicle on the left to yield the right-of-way to the vehicle on the right.

## 2.2 Yield Signs

A yield sign can be an effective traffic control device at intersections if it is found that the right-of-way rules do not provide safe, convenient and efficient traffic movement.



Figure 2: Standard yield sign

## 2.3 Stop Signs

A stop sign clearly assigns the right-of-way between vehicles approaching an intersection from different directions and it has been deemed that a yield sign is inadequate.

For all-way stops to be installed at an intersection, minimum criteria must be met. Where it has been determined that an all-way stop is required, the stop signs are supplemented with an 'All-Way' tab, placed below the stop sign.



Figure 3: Standard stop sign

## 2.4 Roundabouts or Traffic Signals

Traffic control signals and roundabouts are traffic control devices used to allocate right-of-way at an intersection. When traffic volumes at a stop-controlled intersection increase to the point that they cause delays or result in increased collisions, a higher form of traffic control, like traffic control signals or roundabouts, may be necessary.

Roundabouts can be considered at all locations that meet the warrants for traffic control signals.

### 2.5 How You Can Take Action

To learn if stop signs, all-way stops, roundabouts or traffic signals are appropriate at an intersection, please call 306-975-2454 or email Transportation@saskatoon.ca

To report a damaged or lost sign, please call Sign Shop 306-975-2682.

## 2.6 Things to Consider

- Stop signs are a form of traffic control used to assign the right-of-way at intersections; they are not intended to be used as speed control devices or to stop priority traffic over minor traffic.
- The introduction of unwarranted all-way stop signs has been shown to increase speed of the traffic travelling between intersections as drivers try to make-up time after stopping for the unwarranted stop sign.
- The installation of unwarranted all-way stop signs usually results in a higher occurrence of non-compliance of the stop signs at an intersection. This may lead to reduced pedestrian and motorist safety as approaching motorists fail to yield the right-of-way to pedestrians crossing the street.
- The review process for all-way stop signs, traffic control signals or roundabouts may take a few months to complete as it requires a traffic count. Traffic counts mostly take place in the spring, summer and fall.

• The costs to install traffic signals and roundabouts are relatively high. As a result, only those locations that satisfy a set of minimum criteria receive the devices.

## 2.7 Our Service to You

Step 1: Once a request is received, it is assigned to a Transportation Engineer who will contact you with the results of a recent evaluation or to inform you that a traffic count will be scheduled.

Step 2: Traffic volume and collision data will be analyzed to determine if the criteria for the installation of a new traffic control device are met. The study also reviews sightlines available to motorists approaching the intersection, the latest collision statistics at the intersection, the proximity to other traffic control devices on the roads, and the adjacent land use on the street.

Step 3: If the location is suitable for the installation of an all-way stop sign, the signs will be installed. If the location meets the criteria for the installation of a traffic control signal, the City of Saskatoon undertakes a functional design exercise that recommends an appropriate form of traffic control for the intersection.

Step 4: Once the analysis is complete, the project will be identified as part of the proposed budget for Intersection Improvements.

Step 5: The new traffic control signal or roundabout will be installed in the spring through fall months of the budget year in which the funds were approved by Council, depending on the extent of the roadway modifications.

## 3 Pedestrian Crossings

The City of Saskatoon offers a variety of traffic controls at pedestrian crosswalks. The uniform application of traffic control devices for pedestrian crossing promotes the orderly and predictable movement of vehicular and pedestrian traffic. The seven guiding principles for pedestrian crossing control are:

- 1. **Safety** Devices should achieve a high level of compliance and minimize pedestrian exposure to vehicular traffic.
- 2. **Delay** Delay experienced by pedestrians attempting to cross the road should be carefully managed.
- 3. **Equity** Establishing equal access to the system by providing for the movement of people as for vehicular traffic is fundamental.
- 4. **Expectancy** Devices should meet driver expectancy, thereby increasing driver response.
- Consistency Helps ensure that devices are recognized, comprehended and used effectively by all road users.
- 6. **Connectivity** Effective crossing opportunities should be provided to ensure system connectivity for pedestrians while considering proximity to other crossings, driver expectation and safety of pedestrians.
- 7. **Pragmatism** Consider practical issues or consequences associated with the provision of pedestrian crossing control devices (e.g. costs, ease of installation, maintenance).

## 3.1 Unmarked Crosswalks

Most crosswalk locations are currently unmarked by signs, pavement markings or signals. Crosswalks exist at each intersection of two streets, as defined in the Highway Traffic Act for Saskatchewan. Drivers can expect pedestrians to be present on all streets in an urban environment and therefore marking all crosswalk locations is unnecessary.

## 3.2 Standard and Zebra Crosswalks

Crosswalk pavement markings are applied to the roadway to indicate the area pedestrians are supposed to use to cross the roadway. The markings provide an additional reminder to motorists that they should be looking for pedestrians.

Two parallel, solid lines are used to designate a standard pedestrian crossing. However, at crossings where there are higher numbers of vehicles and pedestrians interacting, zebra pavement markings may be used to enhance the visibility of the crosswalk. For both standard and zebra crosswalks, the pavement markings are combined with ground-mounted signage.



Figure 4: Crosswalk pavement markings

### 3.2.1 How You Can Take Action

To learn if crosswalk pavement markings are appropriate at an intersection please call 306-975-2454 or email <a href="mailto:Transportation@saskatoon.ca">Transportation@saskatoon.ca</a>.

To request that existing pavement markings be re-painted, please call the Sign Shop at 306-975-2682.

## 3.2.2 Things to Consider

 Pavement markings are typically only installed between April and November. If a request is made during the winter months, it will be reviewed and implemented in the spring or early summer.

#### 3.2.3 Our Service to You

Step 1: Once the request is received, it will be assigned to a Transportation Engineer who will conduct a review to see if the location is a candidate for crosswalk pavement markings. If traffic and pedestrian volumes are high enough, zebra crosswalk markings may be implemented.

Step 2: If the location is suitable, pavement markings will be installed within six to eight weeks, weather permitting.

## 3.3 Pedestrian Actuated Devices

## 3.3.1 Rectangular Rapid Flashing Beacons (RRFB)

RRFB are pedestrian activated treatment systems which consist of two rapidly and alternately flashing rectangular amber beacons mounted above ground-mounted pedestrian signs.



Figure 5: Rectangular Rapid Flashing Beacons (RRFB)

## 3.3.2 Active Pedestrian Corridor (APC)

Pedestrian activated treatment system which consists of internally illuminated overhead mounted signs with alternating amber flashing beacons and down lighting.



Figure 6: Active Pedestrian Corridor (APC)

## 3.3.3 Pedestrian Actuated Signals (PAS)

Pedestrian actuated signals are a form of controlled pedestrian crossing that provides the rightof-way to pedestrians crossing the roadway when they have the walk signal displayed. The signals can be located at intersections or at mid-block locations. City Council approval is required for all new pedestrian signal installations, and approval is obtained via the budget process.



Figure 7: Pedestrian Actuated Signal (PAS)

### 3.4 How You Can Take Action

To learn if a pedestrian crossing device is appropriate at an intersection or midblock location, please call 306-975-2454 or email Transportation@saskatoon.ca.

To request that existing pavement markings be re-painted, please call Sign Shop at 306-975-2682.

## 3.5 Things to Consider

- The review process for pedestrian crossing devices may take a few months to complete as it requires a traffic count. Traffic counts typically take place in the spring, summer and fall months.
- Pedestrian actuated device costs are relatively high. As a result, only those locations that meet the justification process receive the devices.
- Pavement markings are typically only installed between April and November. If a request is made during the winter months, it will be reviewed and implemented in the next painting season.
- Occasionally, there are operational or accessibility issues that may prevent the installation of a pedestrian crossing device.

## 3.6 Our Service to You

Step 1: Once the request is received, it will be assigned to a Transportation Engineer who will contact you with the results of the recent evaluation or inform you that a pedestrian survey/traffic count will be scheduled.

Step 2: Pedestrian survey and traffic volume data will be analyzed to determine whether the installation of a new pedestrian crossing device is justified.

Step 3: If a location is justified for the installation of a pedestrian crossing device, staff will determine if roadway modifications are required to implement the device.

Step 4: Standard and zebra crosswalks will be installed in the following season. If the identified treatment is a pedestrian actuated device, the location will be added to the list of locations as part of the proposed budget for the Pedestrian Crossing Improvements program.

Step 5: The new pedestrian crossing device will be installed through the spring to the fall of the budget year in which the funds were approved by Council, depending on the extent of the roadway modification required.