

# SILVERSPRING

## 2016 Neighbourhood Traffic Reviews

CITY OF SASKATOON

April 6, 2017

# Silverspring Neighbourhood Traffic Review

April 6, 2017

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## EXECUTIVE SUMMARY

The objective of the Neighbourhood Traffic Management Program is to address traffic concerns within neighbourhoods such as speeding, shortcutting, and pedestrian safety. The program was revised in August 2013 to address traffic concerns on a neighbourhood-wide basis. The program involves additional community and stakeholder consultation that provides opportunity for residents and City of Saskatoon (City) staff to work together in developing solutions that address traffic concerns within their neighbourhood. The process is outlined in the *Traffic Calming Guidelines and Tools*, City of Saskatoon, 2016.

A public meeting was held in May 2016 to identify traffic concerns and potential solutions within the Silverspring neighbourhood. As a result of the meeting, a number of traffic assessments were completed to confirm and quantify the concerns raised by the residents. Based on the residents' input and the completed traffic assessments, a Traffic Plan was developed and presented to the community at a follow-up meeting held in January 2017.

A summary of recommended improvements for the Silverspring neighbourhood are included in **Table ES-1**. The summary identifies the location, recommended improvement, reason and a schedule for implementation. The schedule to implement the Traffic Plan can vary depending on the complexity of the proposed improvement. According to the *Traffic Calming Guidelines and Tools* document, the time frame may range from short-term (1 to 2 years); medium-term (3 to 5 years) and long-term (more than 5 years). Accordingly, the specific time frame to implement the improvements ranges from 1 to 5 years.

The Silverspring Traffic Plan is illustrated in **Exhibit ES-1**.

**Table ES-1: Silverspring Neighbourhood Recommended Improvements**

Item	Location	Recommendation	Reason	Time Frame
<b>Konihowski Road</b>				
1	Carr Crescent / Bourgonje Crescent (North)	Standard crosswalk on south leg of Konihowski Road	Improve pedestrian safety	1 to 2 years
2	Le May Crescent (South)	Upgrade standard crosswalk to zebra crosswalk		
3	Central Avenue	Traffic signals	Improve traffic flow	
4	Rever Road	Stop sign on median island on west leg of Konihowski Road and on south leg of Rever Road	Enhance visibility of stop signs	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
5	Pezer Crescent (North)	Median island on south leg of Konihowski Road	Reduce driver speed	
6	Haslam Place / McWillie Avenue	Median island on east leg of Konihowski Road		
<b>Rever Road</b>				
7	Haslam Street / Fairbrother Crescent (South)	Standard crosswalk on south leg	Improve pedestrian safety	1 to 2 years
		Median island on north leg of Rever Road	Reduce driver speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
8	Haslam Crescent / Fairbrother Crescent (North)	Median island on north leg of Rever Road		
<b>Haslam Crescent</b>				
9	Haslam Street	Yield sign on Haslam Street assigning right-of-way to Haslam Crescent	Improve intersection safety	1 to 2 years



LEGEND

- EXISTING STOP SIGN
- ▲ EXISTING YIELD SIGN
- ▬ EXISTING BUS ROUTE
- ▬ EXISTING SCHOOL ZONE
- ⬆ EXISTING TRAFFIC SIGNAL
- ⚓ EXISTING ACTIVE PEDESTRIAN CORRIDOR SIGNAL LOCATION
- # RECOMMENDATION



SILVERSPRING TRAFFIC PLAN



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## I INTRODUCTION

As the City of Saskatoon continues to grow, many neighbourhoods face issues such as pedestrian safety, cut-through traffic, and increased speeds. In August 2013, City Council adopted the *City of Saskatoon Traffic Guidelines and Tools* that outlines a procedure for completing traffic reviews on a neighbourhood-wide basis. Prior to this, neighbourhood traffic issues were dealt with on a case-by-case basis with mixed results. Since 2013, the formal process has proven to be very successful in providing recommendations that improve neighbourhood traffic conditions and pedestrian safety. Recommendations are developed by the Administration and residents in a collaborative fashion. Accordingly, this report provides the Traffic Management Plan for the Silverspring neighbourhood.

The Silverspring neighbourhood is located in the east portion of Saskatoon and is south of Fedoruk Drive, west of Saskatoon Forestry Farm Park & Zoo, north of Attridge Drive and east of Central Avenue. The land use is mostly residential with elementary schools on Konihowski Road (Silverspring School and Mother Teresa School).

The neighbourhood traffic review includes four stages:

- **Stage 1** - Identify issues, concerns and possible solutions through the initial neighbourhood consultation and the Shaping Saskatoon online discussion.
- **Stage 2** - Develop a draft traffic plan based on residents' input and traffic assessments.
- **Stage 3** - Present the draft traffic plan to the neighbourhood at a follow-up meeting; circulate the plan to other civic divisions for feedback; make adjustments as needed; and present the plan to City Council for approval.
- **Stage 4** - Implement the proposed measures in a specific time frame – short-term (1 to 2 years), medium-term (3 to 5 years) or long-term (more than 5 years).

This report presents the study findings and recommendations.

## 2 STAGE 1: IDENTIFYING ISSUES, CONCERNS, AND POSSIBLE SOLUTIONS

A public meeting was held in May 2016 to identify traffic concerns within the Silverspring neighbourhood. At the meeting, residents were given the opportunity to express their concerns and suggest possible solutions. The meeting minutes are provided in **Appendix A**.

The following pages summarize the concerns and suggested solutions identified during the initial consultation (including all correspondence and Shaping Saskatoon discussion comments received prior to the follow-up meeting) with the residents.

### 2.1 Concern 1 – Speeding and Shortcutting

Shortcutting occurs when non-local traffic passes through the neighbourhood on streets that are designed and intended for low volumes of traffic (i.e., local streets). As speeding often accompanies shortcutting, these concerns have been grouped into one category.

Neighbourhood concerns for speeding and / or shortcutting were at the following locations:

- Central Avenue:
  - Speeding
  - Speeding at Konihowski Road
- Garvie Road: speeding (Central Avenue to Konihowski Road)
- Konihowski Road:
  - Speeding (along curves)
  - High traffic volumes (from Fedoruk Drive)
  - Shortcutting (from Fedoruk Drive)
  - Difficult to get out of driveways due to speeding vehicles
- Konihowski Road & Beerling Crescent:
  - Speeding
  - Vehicles are cutting the corner
- Konihowski Road & Bourgonje Crescent: speeding
- Konihowski Road & Carr Crescent: speeding
- Konihowski Road & Garvie Road: speeding
- Konihowski Road & McWillie Avenue: speeding
- Konihowski Road & Pezer Crescent: speeding

- Konihowski Road & Rever Road: speeding (minivans, City buses)
- Pezer Crescent: speeding
- Rever Road
  - Speeding (buses)
  - Speeding to catch green light
- Somers Road: speeding
- General: vehicles shortcut north to avoid Rever Road

The following solutions were proposed by residents:

- Central Avenue:
  - Install stop signs
  - Install traffic lights
- Central Avenue & Somers Road:
  - Install speed bumps
  - Install a stop sign
  - Close Somers Road
- Garvie Road: install speed bumps
- Konihowski Road:
  - Install temporary stop signs
  - Install speed bumps
  - Monitor speeds
  - Introduce playground zones
  - Install curb extensions and raised median islands
  - Speed control measures north of Garvie Road
  - Implement radar speed traps
  - Install a chicane near schools
- Konihowski Road & Bourgonje Crescent:
  - Enforcement
  - Install speed radar



- Konihowski Road & McWillie Avenue:
  - Install speed bumps or roundabout
  - Install a chicane
- Konihowski Road & Pezer Crescent: extend school zone onto Pezer Crescent
- Konihowski Road & Rever Road: install speed bumps or a roundabout
- Konihowski Road & Scissons Crescent: install a three-way stop
- Konihowski Road at Mother Teresa School: closely monitor speeds
- Rever Road:
  - Install speed bumps
  - Monitor speeds
  - Enforcement during weekend hours
  - Install a radar speed sign
  - Install photo radar
  - Track the speeds of transit
- General:
  - Reduce speed limit to 40 kph
  - Implement year-round school zones
  - Extend school zone all year
  - Block Fedoruk Drive

## 2.2 Concern 2 – Pedestrian Safety

It is important to address pedestrian safety concerns to support active transportation as encouraging walking to nearby amenities, as opposed to driving, reduces traffic volumes.

Pedestrian crosswalks need to adhere to the City of Saskatoon Council Policy C07-018 *Traffic Control at Pedestrian Crossings*, November 15, 2004 which states the following:

“The installation of appropriate traffic controls at pedestrian crossings shall be based on warrants listed in the document entitled *Traffic Control at Pedestrian Crossings – 2004* approved by City Council in 2004.”

Neighbourhood concerns regarding pedestrian safety were at the following locations:

- Attridge Drive & Rever Road:
  - Long wait for pedestrian walk light
  - Pedestrian safety issues
- Central Avenue & Somers Road: potential pedestrian safety issues
- Konihowski Road:
  - Drivers passing on the right when vehicles make left-turns
  - Missing sidewalk between pathway (Somers Road) and Pobran Crescent
- Konihowski Road & Bourgonje Crescent: pedestrian safety issues
- Konihowski Road & Carr Crescent: vehicles are not stopping for pedestrians/bicyclists
- Konihowski Road & Garvie Road: pedestrian safety issues
- Konihowski Road & Pezer Crescent: pedestrian safety issues
- Konihowski Road & Rever Road: drivers are not stopping for pedestrians
- Konihowski Road at Mother Teresa School:
  - Pedestrian safety issues
  - Jaywalking
  - Illegal U-turns
- Rever Road & Haslam Crescent: difficult to see pedestrians and signs due to poor lighting

The following solutions were proposed by residents:

- Attridge Drive & Rever Road: improve pedestrian walk light timing
- Konihowski Road & Carr Crescent / Bourgonje Crescent:
  - Install a crosswalk
  - Install a “Kids are Playing” sign
  - Install a speed limit sign
  - Install a big brick barrier
  - Install amber flashing crosswalk lights
  - Install curb extensions

- Konihowski Road & Carr Crescent:
  - Install crosswalks on both sides
  - Install flashing pedestrian signals
- Konihowski Road & Garvie Road:
  - Install a flashing crosswalk
  - Install a push-button activated pedestrian device
- Konihowski Road & Pobran Crescent:
  - Install a sidewalk on the west side of Konihowski Road from Pobran Crescent to the gravel pathway
  - Install curb extensions
  - Paint a zebra crosswalk
  - Install flashing pedestrian signals
- Konihowski Road & Somers Road: install an improved pedestrian crossing
- Konihowski Road at Mother Teresa School:
  - Install a crosswalk in front of school
  - Install a temporary crosswalk in front of school
  - Install a flashing crosswalk in front of school
  - Introduce the Kiss & Ride program
  - Move crossing guards at Pezer Crescent (North) mid-block in front of Mother Teresa School
- Rever Road & Haslam Crescent:
  - Improve lighting
  - Install a crosswalk
  - Install crossing lights

### 2.3 Concern 3 – Traffic Control

Traffic control signs are used in order to assign the right-of-way. City of Saskatoon Council Policy C07-007 *Traffic Control – Use of Stop and Yield Signs*, January 26, 2009 states that stop and yield signs are not to be used:

- As speed control devices;
- To stop priority traffic over minor traffic;
- On the same approach to an intersection where traffic signals are operational; or
- As a pedestrian crossing device.

Neighbourhood concerns regarding traffic controls were at the following locations:

- Central Avenue & Garvie Road:
  - Difficult for vehicles to make left turns onto Central Avenue
  - Long wait for vehicles turning onto Central Avenue
- Central Avenue & Konihowski Road:
  - Difficult for vehicles to make left turns onto Central Avenue
  - Long wait for vehicles turning onto Central Avenue
- Central Avenue & Somers Road:
  - Difficult for vehicles to make left turns onto Central Avenue
  - Long wait for vehicles turning onto Central Avenue
  - Vehicles ignore the stop sign
- Haslam Crescent & Haslam Street: many near misses
- Konihowski Road & Rever Road:
  - Drivers are not stopping
  - Rolling stops by vehicles

The following solutions were proposed by residents:

- Central Avenue & Fedoruk Drive: install traffic lights
- Central Avenue & Garvie Road: Install traffic lights
- Central Avenue & Konihowski Road:
  - Install stop signs
  - Install traffic lights

- Central Avenue & Somers Road:
  - Install an additional sign
  - Increase visibility
  - Install traffic lights
  - Install a pedestrian crossing when four-lane arterial is constructed
- Konihowski Road & Rever Road:
  - Paint a different type of stop line
  - Install wider curb extensions
  - Install a median
  - Paint zebra crosswalks
  - Install enhanced Active Pedestrian Corridors with white/blue flashing beacons
  - Install a chicane
  - Install a roundabout
- Haslam Crescent & Haslam Street: install a stop or yield sign

## 2.4 Concern 4 – Parking

Parking is allowed on all city streets unless signage is posted. According to City of Saskatoon Bylaw 7200, *The Traffic Bylaw*, December 16, 2013, vehicles are restricted from parking within 10 metres of an intersection and one metre of a driveway or back lane.

Neighbourhood concerns regarding parking were at the following locations:

- Konihowski Road & Rever Road: vehicles park in crosswalk
- Konihowski Road at Mother Teresa School:
  - Not much parking by the schools
  - Cars park in front of photo radar camera

The following solutions were proposed by residents:

- Konihowski Road at Mother Teresa School:
  - Move bus stops to create space for more parking
  - Construct a larger traffic loop to create more parking for parents
  - Move photo radar camera



## 2.5 Concern 5 – Maintenance

Maintenance is requested throughout the consultation process that reflects the work of other civic departments. These include the condition of the street signs (i.e., knocked over, damaged, obstructed by trees), trees obstructing driver's view, or roadway maintenance (i.e., snow clearing, potholes, sanding).

The following neighbourhood concerns regarding maintenance were received:

- Potholes along Central Avenue south of Attridge Drive to 115<sup>th</sup> Street
- Icy roads at Konihowski Road & Somers Road
- Snow piled on roads along Konihowski Road and between schools on west side near Pezer Crescent

The following neighbourhood solutions identified by residents were received:

- Resurface Central Avenue south of Attridge Drive to 115<sup>th</sup> Street

## 2.6 Concern 6 – Major Intersections & Corridors

Major intersections include roadways with higher traffic volumes (i.e., arterials, collectors) or intersections with an existing traffic signal.

Neighbourhood concerns regarding major intersections were at the following locations:

- Attridge Drive:
  - Increase speed from 60 kph to 70 kph
  - Difficult to cross four lanes of traffic to make a left-turn at Central Avenue
  - Speeding
  - High traffic volumes
- Attridge Drive & Central Avenue:
  - Difficult to turn left
  - Sharp southbound ramp radius
  - Truck concerns
  - Concerns turning left onto Central Avenue eastbound to northbound from Attridge Drive

- Attridge Drive & Garvie Road: seniors do not want their view obstructed by a sound wall
- Attridge Drive & Rever Road:
  - Long wait for vehicles
  - Congestion
  - Only seven to eight vehicles are able to cross the intersection before light changes
  - Green light is short
  - Near misses due to eastbound left-turning vehicles speeding to catch the amber light
- Central Avenue:
  - Noisy
  - Wildlife concerns when Central Avenue becomes a four-lane arterial
- Central Avenue & Beef Research Road:
  - Congestion at the entrance
  - Safety concerns

The following solutions were proposed by residents:

- Attridge Drive:
  - Improve traffic flow for westbound drivers immediately after Attridge Drive & Central Avenue intersection
  - Reduce the speed limit to 40 kph
  - Construct a sound wall
  - Install a red light camera
  - Educate drivers
  - Install four lanes rather than three lanes
  - Install a double lane ramp from 108th Street
- Attridge Drive & Central Avenue:
  - Install protected left turns
  - Modify traffic signal timing
  - Construct an interchange
  - Extend the gravel road north of Attridge Drive & Central Avenue and establish a new access at Central Avenue & Konihowski Road
  - Prioritizing signal timing by allowing one green phase at a time

- Tighten southbound ramp radius
- Install lane designations
- Attridge Drive & Rever Road: modify traffic signal timing
- Central Avenue:
  - Install a wildlife fence or signs
  - Install low light standards to reduce light pollution
  - Construct a bicycle pathway along Attridge Drive
  - Create a walkway connection south of Fairbrother Court to the hydrostation

## 3 STAGE 2: DEVELOPMENT OF DRAFT TRAFFIC PLAN

### 3.1 Methodology

Stage 2 of the neighbourhood traffic review included developing a draft traffic management plan. This was completed through the following actions:

- Create a detailed list of all the issues provided by the residents.
- Collect historical traffic studies and information the City has on file for the neighbourhood.
- Prepare a data collection program that will provide the appropriate information needed to undertake the assessments.
- Complete the data collection, which may include:
  - Daily and weekly traffic counts
  - Speed measurements
  - Intersection turning movement counts
  - Pedestrian counts
  - Site observations
  - Collision analysis
- Assess the issues by using the information in reference with City policies, bylaws, and guidelines, transportation engineering design guidelines and technical documents, and professional engineering judgment.

The following sections provide details on the data collected for traffic volume and speed assessments, traffic control assessments, pedestrian crossing assessments, traffic signal assessments and collision analysis. A map of the traffic data collection is shown in **Appendix B**.

### 3.2 Traffic Volume and Speed Assessments

Traffic volumes and travel speeds were measured to assist in determining the need for traffic calming devices. In Saskatoon, the neighbourhood streets are classified typically as either local or collector streets. Traffic volumes [referred to as Average Daily Traffic (ADT)] on these streets should meet the City of Saskatoon guidelines shown in **Table 3-1**.

**Table 3-1: City of Saskatoon Street Classifications and Characteristics**

Characteristics	Classifications					
	Back Lanes		Locals		Collectors	
	Residential	Commercial	Residential	Commercial	Residential	Commercial
Traffic Function	Access function only (traffic movement not a consideration)		Access primary function (traffic movement secondary consideration)		Traffic movement and land access of equal importance	
Average Daily Traffic (vehicles per day)	<500	<1,000	<1,000	<5,000	<5,000	8,000-10,000
Typical Speed Limits (kph)	20		50		50	
Transit Service	Not permitted		Generally avoided		Permitted	
Cyclist	No restrictions or special facilities		No restrictions or special facilities		No restrictions or special facilities	
Pedestrians	Permitted, no special facilities		Sidewalks on one or both sides	Sidewalks provided where required	Typically sidewalks provided both sides	Sidewalks provided where required
Parking	Some restrictions		No restrictions or restriction on one side only		Few restrictions other than peak hour	

Travel speeds were measured to determine the 85<sup>th</sup> percentile speed, which is the speed at which 85 percent of vehicles are travelling at or below. The speed limit in the Silverspring neighbourhood is 50 kph, except for school zones where the speed limit is 30 kph from September to June, Monday to Friday, 8:00 a.m. to 5:00 p.m.

The speed studies and ADT on streets where speeding was identified as an issue are summarized in **Table 3-2**.



**Table 3-2: Speed Studies and Average Daily Traffic Counts (2016)**

Street	Between	Class	Average Daily Traffic (vehicles per day)	Speed (kph)
Konihowski Road	Carr Crescent / Bourgonje Crescent (North) to Carr Crescent / Bourgonje Crescent (South)	Major Collector	1650	53
	Beerling Crescent (North) to Beerling Crescent (South)		1750	51
	Pezer Crescent (North) to Pezer Crescent (South)		2200	School = 32 Regular = 52
	Haslam Place / McWillie Avenue to Rever Road		1850	55
Garvie Road	McWillie Avenue to Scissons Crescent (West)		1300	54
Rever Road	Haslam Crescent / Fairbrother Crescent (North) to Haslam Street / Fairbrother Crescent (South)		4600	58

### 3.3 Traffic Control Assessments

Yield, stop, and all-way stop controls need to meet the City of Saskatoon Council Policy C07-007 *Traffic Control – Use of Stop and Yield Signs*, January 26, 2009.

Turning movement counts were completed to determine the need for an all-way (i.e., three-way or four-way) stop control. Criteria outlined in Council Policy C07-007 that may warrant an all-way stop include:

- A peak hour count greater than 600 vehicles
- An ADT greater than 6,000 vehicles per day; or
- When five or more collisions are reported in the last twelve month period and are of a type susceptible to correction by an all-way stop control.

Further conditions that must be met for an all-way stop to be warranted are:

1. Traffic entering the intersection from the minor street must be at least 35% for a four-way stop and 25% for a three-way stop.
2. No other all-way stop or traffic signal within 200 metres.

Results of the studies are shown in **Table 3-3**.

**Table 3-3: All-Way Stop Warrant Criteria**

Location	Criteria 1: Peak Hour Count (greater than 600 vehicles)	Criteria 2: Average Daily Traffic (greater than 6,000vpd)	Criteria 3: Collisions within most recent 12 months (5 or more)	Result
Garvie Road & Scissons Crescent (West)	234 vehicles (no)	2,520vpd (no)	0 (no)	Continue to Step 2
Central Avenue & Konihowski Road	1,115 vehicles (yes)	16,120vpd (yes)	0 (no)	
Central Avenue & Garvie Road	947 vehicles (yes)	13,510vpd (yes)	1 (no)	
Central Avenue & Somers Road	825 vehicles (yes)	10,470vpd (yes)	1 (no)	

Provided one of the above criteria are met, continue to Step 2 to check the condition requirements.

**Table 3-4: All-Way Stop Warrant Condition Requirements**

Location	Condition 1: Traffic on minor street is at least 25% for a three-way stop and 35% for a four-way stop	Condition 2: No all-way stop or traffic signals within 200 metres	Result
Garvie Road & Scissons Crescent (West)	10% (no)	>200 metres (yes)	All-Way Stop Not Warranted
Central Avenue & Konihowski Road	10% (no)	410 metres (yes)	
Central Avenue & Garvie Road	20% (no)	840 metres (yes)	
Central Avenue & Somers Road	30% (yes)	550 metres (yes)	All-Way Stop Warranted

### 3.4 Pedestrian Assessments

Pedestrian assessments are conducted to determine the need for pedestrian actuated signalized crosswalks which are in adherence to the City of Saskatoon Council Policy C07-018 *Traffic Control at Pedestrian Crossings*, November 15, 2004. Devices include an activated pedestrian corridor (flashing yellow lights) or pedestrian actuated signal. A warrant system assigns points for a variety of conditions including:

- Number of traffic lanes to be crossed;
- Presence of a physical median;
- Posted speed limit of the street;
- Distance the crossing point is to the nearest protected crosswalk point; and
- Number of pedestrians and vehicles at the location.

Pedestrian and traffic data is collected during the five peak hours of: 8:00 a.m. to 9:00 a.m., 11:30 a.m. to 1:30 p.m., and 3:00 p.m. to 5:00 p.m.

A standard pedestrian crosswalk or a zebra crosswalk (i.e., striped) may be considered when a signalized crosswalk is not warranted. A summary of the pedestrian studies are provided in **Table 3-5**.

**Table 3-5: Pedestrian Assessments**

Location	Number of Pedestrians Crossing During Peak Hours	Result
Konihowski Road & Rever Road	33	Pedestrian Device Not Warranted
Konihowski Road & Pobran Crescent (South)	28	
Konihowski Road at Mother Teresa School	97	
Konihowski Road & Carr Crescent / Bourgonje Crescent (North)	8	
Konihowski Road & Garvie Road	245	Pedestrian Device Warranted

Details of the active pedestrian corridor and pedestrian actuated signal assessments are provided in **Appendix C**.

### 3.5 Traffic Signal Assessments

Assessments are 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 traffic signal; and
- Number of pedestrians and vehicles at the location.

Pedestrian and traffic data is collected during the six 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.

If a traffic signal is not warranted, additional measures to improve safety (i.e., parking restrictions, oversized stop signs) may be considered. A summary of the traffic signal assessments is provided in **Table 3-6**.

**Table 3-6: Traffic Signal Assessments**

Location	Traffic Signal Warrant Points	Result
Central Avenue & Konihowski Road	105	Traffic Signal Warranted
Central Avenue & Garvie Road	38	Traffic Signal Not Warranted
Central Avenue & Somers Road	28	

Details of the traffic signal assessments are provided in **Appendix D**.

### 3.6 Collision Analysis

The most recently available five year collision data (2011 to 2015) was provided by SGI. High-collision locations, typically noted as the locations with an average of two or more collisions per year, were reviewed in more depth to identify trends and possible improvements. Locations with two or more collisions per year include:

- Konihowski Road & Somers Road

Details of the collision analysis are provided in **Appendix E**.

## 4 STAGE 3: PRESENTATION OF TRAFFIC PLAN

### 4.1 Methodology

Stage 3 of the neighbourhood traffic review included finalizing the recommended plan. This was achieved by completing the following steps:

- Based on the assessments, prepare a plan that illustrates the appropriate recommended improvements
- Present the draft plan to the residents at a follow-up public meeting
- Circulate the draft plan to the civic divisions for comments
- Revise the draft plan based on feedback from the stakeholders
- Prepare a technical document summarizing the recommended plan and project process

The tables in the following sections provide the details of the recommended traffic management plan, including the location, recommended improvement, and reason for the recommended improvement.

### 4.2 Speeding and Shortcutting

As stated in Council Policy C07-007 Traffic Control – Use of Stop and Yield Signs, January 26, 2009, “stop signs are not to be used as speed control devices.”

The recommended improvements to address speeding and shortcutting are detailed in **Table 4-1**.

**Table 4-1: Recommended Improvements – Speeding and Shortcutting**

Location	Recommended Improvement	Reason
Konihowski Road & Pezer Crescent (North)	Median island on south leg of Konihowski Road	Reduce driver speed
Konihowski Road & Haslam Place / McWillie Avenue	Median island on east leg of Konihowski Road	
Rever Road & Haslam Street / Fairbrother Crescent (South)	Median island on north leg of Rever Road	
Rever Road & Haslam Crescent / Fairbrother Crescent (North)	Median island on north leg of Rever Road	



### 4.3 Pedestrian Safety

The recommended improvements to increase pedestrian safety are listed in **Table 4-2**.

**Table 4-2: Recommended Improvements - Pedestrian Safety**

Location	Recommended Improvement	Reason
Konihowski Road & Carr Crescent / Bourgonje Crescent (North)	Standard crosswalk on south leg of Konihowski Road	Improve pedestrian safety
Konihowski Road & Le May Crescent (South)	Upgrade standard crosswalk to zebra crosswalk	
Rever Road & Haslam Street	Standard crosswalk on south leg	

### 4.4 Intersection Safety

The recommended improvements to intersections that will improve the level of safety by clearly identifying the right-of-way through traffic controls are provided in **Table 4-3**.

**Table 4-3: Recommended Improvements – Intersection Safety**

Location	Recommended Improvement	Reason
Konihowski Road & Central Avenue	Traffic signals	Improve traffic flow
Konihowski Road & Rever Road	Stop sign on median island on west leg of Konihowski Road and on south leg of Rever Road	Enhance visibility of stop signs
Haslam Crescent & Haslam Street	Yield sign on Haslam Street assigning right-of-way to Haslam Crescent	Improve intersection safety

### 4.5 Follow Up Consultation – Presentation of Traffic Management Plan

The recommended improvements were presented to residents and stakeholders at a follow-up public meeting in January 2017. Meeting minutes are provided in **Appendix F**. Recommended improvements that were not supported were eliminated or altered accordingly.

A decision matrix detailing the list of recommended improvements presented at the follow-up meeting are included in **Appendix G**. Additional issues raised after the presentation of the draft traffic plan were considered and outlined in **Appendix H**. Recommendations were added to the list of improvements if necessary.

The revised list of recommendations was then circulated to the civic divisions (including Saskatoon Police Service, Saskatoon Light & Power, Saskatoon Fire Department, Parking Services, Roadways & Operations and Transit) to gather comments and concerns. General support was received.

## 5 STAGE 4: IMPLEMENTATION

Stage 4, the final stage of the neighbourhood traffic review, is to install the recommended improvements within the specified time frame. The time frame depends upon the complexity and cost of the solution. A short-term time frame is defined by implementing the improvements within 1 to 2 years; medium-term is 3 to 5 years; and long-term is more than 5 years.

The placement of signs, pavement markings and temporary traffic calming will be completed short-term (1 to 2 years). Most often the installations take place in spring / summer of the following year. Therefore, installations for Silverspring are likely to take place in spring / summer 2017.

The estimated cost of the improvements included in the Neighbourhood Traffic Management Plan are outlined in the following tables:

- **Table 5-1:** Signs, Pavement Markings & Temporary Traffic Calming Cost Estimate
- **Table 5-2:** Permanent Traffic Calming Cost Estimate
- **Table 5-3:** Traffic Signal Cost Estimate
- **Table 5-4:** Total Cost Estimate

**Table 5-1: Signs, Pavement Markings & Temporary Traffic Calming Cost Estimate**

Location	Device (# of Devices)	Cost Estimate	Time Frame
Konihowski Road & Carr Crescent / Bourgonje Crescent (North)	Standard crosswalk (1)	\$250	1 to 2 years
Konihowski Road & Le May Crescent (South)	Zebra crosswalk (1)	\$250	
Rever Road & Haslam Street / Fairbrother Crescent (South)	Standard crosswalk (1)	\$250	
Haslam Crescent & Haslam Street	Yield sign (1)	\$250	
Konihowski Road & Rever Road	Stop sign (2)	\$500	
	Median island (2)	\$1000	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
Konihowski Road & Pezer Crescent (North)	Median island (1)	\$500	
Konihowski Road & Haslam Place / McWillie Avenue	Median island (1)	\$500	
Rever Road & Haslam Street / Fairbrother Crescent (South)	Median island (1)	\$500	
Rever Road & Haslam Crescent / Fairbrother Crescent (North)	Median island (1)	\$500	
<b>Total</b>		<b>\$4,500</b>	

**Table 5-2: Permanent Traffic Calming Cost Estimate**

Location	Device (# of Devices)	Cost Estimate	Time Frame
Konihowski Road & Rever Road	Median island (2)	\$10,000	3 to 5 years
Konihowski Road & Pezer Crescent (North)	Median island (1)	\$ 5,000	
Konihowski Road & Haslam Place / McWillie Avenue	Median island (1)	\$ 5,000	
Rever Road & Haslam Street / Fairbrother Crescent (South)	Median island (1)	\$ 5,000	
Rever Road & Haslam Crescent / Fairbrother Crescent (North)	Median island (1)	\$ 5,000	
<b>Total</b>		<b>\$30,000</b>	

**Table 5-3: Traffic Signal Cost Estimate**

Location	Device (# of Devices)	Cost Estimate	Time Frame
Konihowski Road & Central Avenue	Traffic signals (1)	\$0 (Funded by other sources)	1 to 2 years
<b>Total</b>		<b>\$0</b>	

**Table 5-4: Total Cost Estimate**

Category	Time Frame	
	Short-Term (1 to 2 years)	Medium-Term (3 to 5 years)
Signs, Pavement Markings & Temporary Traffic Calming	\$4,500	NA
Permanent Traffic Calming	NA	\$30,000
Traffic Signal	\$0	NA
<b>Total</b>	<b>\$4,500</b>	<b>\$30,000</b>

The total cost estimate for short-term improvements (signs, pavement markings and temporary traffic calming) is **\$4,500**. The total cost estimate for medium-term improvements (permanent traffic calming) is **\$30,000**.

Resulting from the Neighbourhood Traffic Review is a list of recommended improvements, including the location, reason and time frame as summarized in **Table 5-5**.

The resulting recommended Silverspring Neighbourhood Traffic Plan is illustrated in **Exhibit 5-1**.

**Table 5-5: Silerspring Neighbourhood Recommended Improvements**

Item	Location	Recommendation	Reason	Time Frame
<b>Konihowski Road</b>				
1	Carr Crescent / Bourgonje Crescent (North)	Standard crosswalk on south leg of Konihowski Road	Improve pedestrian safety	1 to 2 years
2	Le May Crescent (South)	Upgrade standard crosswalk to zebra crosswalk		
3	Central Avenue	Traffic signals	Improve traffic flow	
4	Rever Road	Stop sign on median island on west leg of Konihowski Road and on south leg of Rever Road	Enhance visibility of stop signs	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
5	Pezer Crescent (North)	Median island on south leg of Konihowski Road	Reduce driver speed	
6	Haslam Place / McWillie Avenue	Median island on east leg of Konihowski Road		
<b>Rever Road</b>				
7	Haslam Street / Fairbrother Crescent (South)	Standard crosswalk on south leg	Improve pedestrian safety	1 to 2 years
		Median island on north leg of Rever Road	Reduce driver speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
8	Haslam Crescent / Fairbrother Crescent (North)	Median island on north leg of Rever Road		
<b>Haslam Crescent</b>				
9	Haslam Street	Yield sign on Haslam Street assigning right-of-way to Haslam Crescent	Improve intersection safety	1 to 2 years



### LEGEND

- EXISTING STOP SIGN
- ▲ EXISTING YIELD SIGN
- EXISTING BUS ROUTE
- EXISTING SCHOOL ZONE
- 🚦 EXISTING TRAFFIC SIGNAL
- 🚶 EXISTING ACTIVE PEDESTRIAN CORRIDOR SIGNAL LOCATION
- Ⓜ RECOMMENDATION



# SILVERSPRING TRAFFIC PLAN



APPENDIX A: PUBLIC MEETING #1 – MAY 12, 2016 MINUTES

**Silverspring Neighbourhood Traffic Review**  
**Thursday, May 12, 2016, 7:30 PM – 9:30 PM**  
**Mother Teresa Elementary School (738 Konihowski Road)**

**Agenda**

1. Welcome & Introductions
2. Presentation from Transportation Division
3. Small Group Discussions & Report Back to Large Group
4. Next Steps
5. Large Group Discussion – Questions & Answers

**1. Welcome & Introductions**

(Presented by Mitch Riabko and Kathy Dahl, Facilitators)

**2. Presentation from Transportation Division – Silverspring Neighbourhood Traffic Review**

(Presented by Mariniel Flores, Engineer-in-Training, Transportation Engineer)

- Presentation Outline
  - Neighbourhood Traffic Review Process
  - Silverspring Review Schedule
  - Sources of Information
  - Past Concerns Received
  - Description of Traffic Calming & Pedestrian Safety Devices
  - Attridge Drive & Central Avenue Intersection Improvements
  - Corridor Reviews & Major Intersection Reviews
- Neighbourhood Traffic Review Process
  - August 2013 – New process
  - Mandate – Reduce and calm traffic, and improve safety within neighbourhoods
  - 2014 – Reviewed 11 neighbourhoods
  - 2015 – Reviewed 8 neighbourhoods
  - 2016 – Silverspring, Parkridge, Sutherland, Willowgrove, Stonebridge, Hampton Village, Grosvenor Park, Lakeridge
- Silverspring Review Schedule
  - Stage 1 – Identify issues & possible solutions through community consultation (May to Fall 2016)
  - Stage 2 – Develop a draft traffic plan
  - Stage 3 – Present draft traffic plan to community for feedback (Fall 2016)
  - Stage 4 – Implement changes over time (Beginning Spring 2017)
- Sources of Information
  - Past studies
  - Collision analysis

- Feedback from public consultation
- Traffic counts & assessments
- Past Concerns Received
  - Speeding & Pedestrian Safety – Konihowski Road, Garvie Road, Rever Road
  - Konihowski Road & Rever Road
  - Garvie Road & Scissons Crescent
  - Central Avenue & Konihowski Road
  - Attridge Drive & Central Avenue
- Traffic Calming Devices
  - Speed Display Board
  - Curb Extension
  - Raised Median Island
  - Roundabout
  - Diverter
  - Right-In/Right-Out Island
  - Directional Closure
  - Raised Median Through Intersection
  - Full Closure
- Pedestrian Devices
  - Standard Crosswalk
  - Zebra Crosswalk
  - Active Pedestrian Corridor
  - Pedestrian Actuated Signal
- Attridge Drive & Central Avenue Intersection Improvements
  - Intersection improvements are being conducted as part of the North Commuter Parkway and Traffic Bridge Project
  - Intersection improvements include relocating the northbound to eastbound off-ramp from Circle Drive further west to alleviate weaving issues, addition of an eastbound to northbound dual left-turn bay, and revised signal timing. This work is scheduled to be complete in the upcoming construction season.
  - Sound attenuation walls will be constructed and will be in place by October 2018.
- Corridor Reviews & Major Intersection Reviews
  - Created to address issues at intersections along arterial streets as Neighbourhood Traffic Reviews addresses local and collector streets within neighbourhoods
  - Recommendations will be identified and projects will be prioritized for funding approval
  - Report will be presented to City Council

### **3. Small Group Discussions**

- Residents were divided into small groups to discuss traffic concerns in Silverspring and potential solutions
  
- Group 1: Mariniel Flores (City Facilitator)
  - Attridge Drive
    - Difficult to merge onto Attridge Drive from Circle Drive to turn left onto Central Avenue. Have to complete a u-turn around curb (or Dutch Growers) or re-route from College Drive. Drivers need to be more courteous. Suggest driver education awareness.
  - Attridge Drive & Rever Road
    - Lights are too long at this intersection
  - Attridge Drive
    - There should be four lanes on Attridge Drive rather than three lanes. A double lane ramp from 108<sup>th</sup> Street is suggested.
  - Attridge Drive & Central Avenue
    - Suggesting one green phase at a time. Prioritize signal timing.
    - Sharp southbound ramp radius from Central Avenue onto Attridge Drive especially in winter. Suggest tightening turn.
    - No lane designations
  - Central Avenue
    - Many potholes along Central Avenue south of Attridge Drive to 115<sup>th</sup> Street. Resurfacing needed.
    - Check if traffic signals or four-way stop is warranted at Fedoruk Drive, Somers Road, Garvie Road and Konihowski Road
  - Central Avenue & Beef Research Road
    - Backed up at the entrance
    - Did North Commuter Parkway Project study look at this?
  - Konihowski Road & McWillie Avenue
    - Speeding concerns (City buses, minivans). Speed bumps or roundabout suggested.
    - Suggest a chicane
  - Konihowski Road & Rever Road
    - Speeding concerns (City buses, minivans). Speed bumps or roundabout suggested.
    - People are not stopping at the three-way stop. Suggesting different type of stop line, wider curb extensions and a median to narrow the roadway, zebra crosswalks, enhanced Active Pedestrian Corridors with white-blue flashing beacons.
    - Very dangerous for children
    - Vehicles park in crosswalk
    - Suggest a chicane
  - Konihowski Road
    - Concerns at school routes along Konihowski Road to and from school (during non-school hours too)
    - Suggest a chicane near schools

- Konihowski Road & Somers Road
  - Icy roads
- General
  - Seniors at the care home near Garvie Road & Central Avenue like to look out their windows and do not want their view obstructed by a sound wall
  - Suggest year-round school zones
- Group 2: Justine Nyen (City Facilitator)
  - Mother Teresa School
    - Need crosswalk closer to school
    - Kids crossing mid-block after being dropped off by parents who park on opposite side
    - U-turns
    - Kiss 'N Ride program at Silverspring but hasn't been implemented at Mother Teresa School
    - Review bus loading zone. May have been extended more than school requires. May be opportunity to add more parent parking on school side.
    - Mother Teresa has crossing guards which are currently at Pezer Crescent (N) could be moved to mid-block crossing in front of school
  - Silverspring School
    - Review bus loading zone. May have been extended more than school requires. May be opportunity to add more parent parking on school side.
  - Pezer Crescent
    - Extend Konihowski Road school zone onto Pezer Crescent because there's speeding around corner
    - Kids in area later than school zone hours so extend school zone all year
  - Konihowski Road
    - More traffic from Fedoruk Drive
    - Flashing pedestrian signals at Pobran Crescent, at Carr Crescent, school routes and park paths
    - Drivers passing on right when vehicles make left-turns
    - No sidewalk between pathway (Somers Road) and Pobran Crescent
    - Snow pile between schools on west side near Pezer Crescent
  - Konihowski Road & Rever Road
    - Rolling stop by vehicles at the three-way stop
    - Not stopping for pedestrians
  - Central Avenue
    - Deer crossing. Concerned about collisions when it's four-lane arterial. Follow-up if there are plans for wildlife fence or other plans (i.e., signs etc.).

- Difficult to make left-turns out of Silverspring at Somers Road, Garvie Road and Konihowski Road
  - Central Avenue & Somers Road
    - Ensure there's a pedestrian crossing when four-lane arterial is constructed
  - Rever Road
    - Speeding southbound to "catch" green light
  - General
    - Speed limit should be 40 km/h (lower than 50 km/h)
    - Photo radar camera is in poor location because cars park in front (one area that cars can actually park)
- Group 3: Lanre Akindipe (City Facilitator)
  - Garvie Road
    - Speeding from Central Avenue to Konihowski Road
    - Suggest three-way stop at Scissons Crescent
    - Suggest speed humps
  - Konihowski Road
    - Snow piled on roads
    - Left turn delays at Central Avenue. Suggest traffic signals.
    - Speeding concerns
  - Attridge Drive & Rever Road
    - Pedestrian concerns
  - Central Avenue & Attridge Drive
    - Concerns regarding trucks moving on Central Avenue
    - Unsafe intersection
  - Central Avenue & Beef Research Road
    - Safety concerns
  - General
    - Move photo radar camera (not in a good location)
    - Bicycle pathway along Attridge Drive
    - Walkway connection south of Fairbrother Court to the hydrostation
- Group 4: Jay Magus (City Facilitator)
  - Konihowski Road & Rever Road
    - People run this stop sign
    - Visibility issues
    - Noise concerns (i.e., modified muffler systems, vehicles taking off from the three-way stop)
    - People pause and go at this stop
    - Roundabout suggested
  - Konihowski Road
    - Speeding along curves
    - Difficult to get out of driveway
    - Speeding concerns along the roadway
  - Central Avenue & Attridge Drive

- Concerns turning left onto Central Avenue eastbound to northbound from Attridge Drive
- Central Avenue
  - Lights needed at Somers Road, Garvie Road and Konihowski Road
  - Difficult to get over from Central Avenue to turn left onto Central Avenue
- Central Avenue & Konihowski Road
  - Difficult to turn left from Konihowski Road to Central Avenue
- Somers Road
  - Improved pedestrian crossing suggested
  - Stop sign
- Schools
  - Walking and crossing in front of schools and loops
  - Crosswalk right in front of Catholic school
- Beerling Crescent
  - Speeding concerns and cutting the corner
- General
  - Vehicles shortcut north to avoid Rever Road
  - Block Fedoruk Drive
  - Are loop detectors working?
  - Consider data collection when Fedoruk Drive opens
  - Observe winter conditions in front of schools

#### **4. Next Steps**

(Presented by Jay Magus, Transportation Engineering Manager)

1. Continue monitoring traffic issues in your neighbourhood
2. Mail-in or email comments no later than June 10, 2016
3. Additional public input via City on-line Community Engagement webpage no later than June 10, 2016 at <http://shapingsaskatoon.ca/discussions/silverspring-neighbourhood-traffic-review>
4. Traffic & pedestrian data collection, analysis
5. Develop recommendations and prepare draft Traffic Plan
6. Follow-up public input meeting to provide input on draft Traffic Plan
7. Determine revisions and finalize Traffic Plan
8. Present Traffic Plan to City Council for approval

#### **5. Large Group Discussion – Questions & Answers**

- Question/Comment 1:
  - Resident: The process does not account for urgent issues.
  - City: Any urgent concerns will be addressed.
- Question/Comment 2:
  - Resident: Data should not just be collected in the summer.

- Question/Comment 3:
  - Resident: What improvement is being made to the off-ramp from Circle Drive?
  - City: The off-ramp is being relocated further west to alleviate weaving issues.
- Question/Comment 4:
  - Resident: What is the timeline of the improvements at the intersection of Attridge Drive and Central Avenue?
  - City: Improvements will be made this upcoming construction season.
  - Resident: What about eastbound to northbound lanes on Central Avenue?
  - City: This upcoming construction season as well.
- Question/Comment 5:
  - Resident: How much does the City work with the schools (e.g., moving school bus stops). How much contact does City have with the schools?
  - City: There is no regular process. The process is initiated by the school board. The principal use to initiate the process. There is now one select person. The City moves signs in the summer (i.e., parking, loading zones). The City is heavily involved in the planning of new schools (i.e., site plans, pick-ups/drop-offs (e.g., Willowgrove school).
- Question/Comment 6:
  - Resident: Will you be contacting Mother Teresa and Silverspring Schools or will the residents need to contact them?
  - City: It depends on what the concerns are. The loop in front of the schools is their property. Our responsibility is anything in the City right-of-way. The schools need to be consulted regarding school bus loading zones. We are responsible for traffic controls.
- Question/Comment 7:
  - Resident: It's odd that the North Commuter Parkway project is approved without traffic signals at some intersections (i.e., Fedoruk Drive, Somers Road, Garvie Road, Konihowski Road). Are traffic signals proposed?
  - City: We'll look into this.
  - Resident: The traffic signals should be installed now. The neighbourhood can't wait two years.



- Resident: Future volumes should be considered not present volumes. Evergreen wasn't there five years ago.
- City: The analysis considered these neighbourhoods at full build-out. It was forecasted back then. We'll look at this again.
- Resident: Funneling people from two to three neighbourhoods. Lots of traffic.

### **List of Representatives**

- Mitch Riabko, Kathy Dahl – Great Works Consulting, Facilitators
- Jay Magus – City of Saskatoon, Transportation & Utilities, Transportation Engineering Manager
- Mariniel Flores – City of Saskatoon, Transportation & Utilities, Engineer-in-Training, Transportation Engineer
- Lanre Akindipe – City of Saskatoon, Transportation & Utilities, Transportation Engineer
- Yang Li – City of Saskatoon, Transportation & Utilities, Engineer-in-Training, Transportation Engineer
- Justine Nyen – City of Saskatoon, Transportation & Utilities, Transportation Engineer

## APPENDIX B: TRAFFIC DATA COLLECTION MAP





# SILVERSPRING TRAFFIC DATA



## APPENDIX C: PEDESTRIAN DEVICE ASSESSMENTS

**Konihowski Road & Rever Road**

Prepared By: Mariniel Flores Date: Tuesday, January 17, 2017

Location & Roadway Classification: Konihowski Rd (Major Collector) & Rever Rd (Major Collector)

Date of Count: Day of wk: Wednesday Mth, Day, Yr: Wednesday, September 21, 2016

Weather: Warm

Traffic Control Devices: Three-way stop

Current Pedestrian Control: Standard crosswalk

Other Notes: \_\_\_\_\_

Number of travel lanes passing through the crosswalk(s) 2 lanes

Is there a physical median in this crosswalk(s)? y (y or n)

Speed limit (or 85th percentile speed) 50 km/h

85th percentile (check one)

Posted Limit

Distance to nearest protected crosswalk 430 m

Location: Konihowski Rd & Garvie Rd

Type: One-way stop, zebra crosswalk

Is the orientation of this crosswalk(s) N-S? y (y or n)

Duration of pedestrian count 5 hrs

Elementary:	33	Total Warranted PC Points:		or	/ period
High School:		Highest PC point value:	3,180	at	
Adult:		Active Ped Corridor Points:			
Senior:		Pedestrian Actuated Signal Points:	32		
Vehicles passing through crosswalk(s):	1,749				

**ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED  
PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED**

**\*\*Install device at the East Crosswalk \*\***

(Note: Standard and Zebra crosswalks can be installed on both sides if pedestrian volumes are approximately equal.)

Time (15 minute intervals)	Vehicle Counts				Pedestrian Counts								
	SB	WB	NB	EB	West Crosswalk				East Crosswalk				
					Child	Teen	Adult	Senior / Impaired	Senior / Impaired	Adult	Teen	Child	
7:00													
7:15													
7:30													
7:45													
8:00		66	39	11									2
8:15		91	86	25	3								5
8:30		77	42	12									
8:45		43	28	5									
9:00													
9:15													
9:30													
9:45													
<b>AM Totals</b>		277	195	53	3								7
11:30		26	21	3									2
11:45		16	15	4									
12:00		19	21	3									
12:15		17	35	3									
12:30		20	25	7									
12:45		47	26	5									1
13:00		25	20	2									1
13:15		17	19	4	1								1
<b>Noon Totals</b>		187	182	31	1								5
14:00													
14:15													
14:30													
14:45													
15:00		48	48	16									1
15:15		78	77	6									4
15:30		44	44	3									3
15:45		35	42	9									5
16:00		22	44	11									2
16:15		30	51	8									
16:30		36	63	10	1								
16:45		36	53	10									1
17:00													
17:15													
17:30													
17:45													
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19:45													
20:00													
20:15													
20:30													
20:45													
<b>PM Totals</b>		329	422	73	1								16
<b>Totals</b>		793	799	157	5								28
<b>West Crosswalk =</b>									<b>5</b>	<b>East Crosswalk =</b>			<b>28</b>

**Konihowski Road & Pobran Crescent (South)**

Prepared By: Mariniei Flores Date: Wednesday, January 18, 2017

Location & Roadway Classification: Konihowski Rd (Major Collector) & Pobran Cres (S) (Local)

Date of Count: Day of wk: Tuesday Mth, Day, Yr: Tuesday, September 27, 2016

Weather: 14.9°C

Traffic Control Devices: Yield sign on Pobran Cres assigning right-of-way to Konihowski Rd

Current Pedestrian Control: None

Other Notes: \_\_\_\_\_

Number of travel lanes passing through the crosswalk(s) 2 lanes

Is there a physical median in this crosswalk(s)? n (y or n)

Speed limit (or 85th percentile speed) 50 km/h

85th percentile (check one)

Posted Limit

Distance to nearest protected crosswalk 75 m

Location: Konihowski Rd & Le May Cres

Type: Yield sign, standard crosswalk

Is the orientation of this crosswalk(s) N-S? n (y or n)

Duration of pedestrian count 5 hrs

Elementary:	28	Total Warranted PC Points:		or	/ period
High School:		Highest PC point value:	1,488	at	
Adult:		Active Ped Corridor Points:			
Senior:		Pedestrian Actuated Signal Points:	16		
Vehicles passing through crosswalk(s):	1,091				

**ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED  
PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED**

**\*\*Install device at the North Crosswalk \*\***

(Note: Standard and Zebra crosswalks can be installed on both sides if pedestrian volumes are approximately equal.)

Time (15 minute intervals)	Vehicle Counts				Pedestrian Counts								
	SB	WB	NB	EB	North Crosswalk				South Crosswalk				
					Child	Teen	Adult	Senior / Impaired	Senior / Impaired	Adult	Teen	Child	
7:00													
7:15													
7:30													
7:45													
8:00	49		17	4	2								
8:15	78		26		4								
8:30	68		40										
8:45	19		28	1									
9:00													
9:15													
9:30													
9:45													
<b>AM Totals</b>	<b>214</b>		<b>111</b>	<b>5</b>	<b>6</b>								
11:30	10		14	1									
11:45	12		18										
12:00	18		17	2	1								
12:15	23		20										
12:30	20		22										
12:45	18		19	2									
13:00	15		13										
13:15	8		8		3								
<b>Noon Totals</b>	<b>124</b>		<b>131</b>	<b>5</b>	<b>4</b>								
14:00													
14:15													
14:30													
14:45													
15:00	28		29										
15:15	19		54										
15:30	20		39	1	3								4
15:45	26		37	1	4								1
16:00	17		39										
16:15	21		31										
16:30	24		48	1	4								
16:45	32		32	2	2								
17:00													
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19:15													
19:30													
19:45													
20:00													
20:15													
20:30													
20:45													
<b>PM Totals</b>	<b>187</b>		<b>309</b>	<b>5</b>	<b>13</b>								<b>5</b>
<b>Totals</b>	<b>525</b>		<b>551</b>	<b>15</b>	<b>23</b>								<b>5</b>
<b>North Crosswalk =</b>									<b>23</b>	<b>South Crosswalk =</b>			<b>5</b>



**Konihowski Road at Mother Teresa School**

Prepared By: Mariniel Flores Date: Wednesday, January 18, 2017

Location & Roadway Classification: Konihowski Rd (Major Collector) mid-block in front of Mother Teresa School  
Date of Count: Day of wk: Wednesday Mth, Day, Yr: Wednesday, September 28, 2016  
Weather: 13.6°C  
Traffic Control Devices: None  
Current Pedestrian Control: None  
Other Notes: \_\_\_\_\_

Number of travel lanes passing through the crosswalk(s) 2 lanes

Is there a physical median in this crosswalk(s)? n (y or n)

Speed limit (or 85th percentile speed) 30 km/h

- 85th percentile (check one)
- Posted Limit

Distance to nearest protected crosswalk 140 m

Location: Konihowski Rd & Pezer Cres (S)  
Type: Stop sign, Active Pedestrian Corridor

Is the orientation of this crosswalk(s) N-S? n (y or n)

Duration of pedestrian count 5 hrs

Elementary:	97	Total Warranted PC Points:	18,261	or	9,131	/ period
High School:		Highest PC point value:	11,760	at		
Adult:		Active Ped Corridor Points:	2			
Senior:		Pedestrian Actuated Signal Points:	17			
Vehicles passing through crosswalk(s):	938					

**ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED  
PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED**

**\*\*Install device at the North Crosswalk \*\***

(Note: Standard and Zebra crosswalks can be installed on both sides if pedestrian volumes are approximately equal.)

Time (15 minute intervals)	Vehicle Counts				Pedestrian Counts								
	SB	WB	NB	EB	North Crosswalk				South Crosswalk				
					Child	Teen	Adult	Senior / Impaired	Senior / Impaired	Adult	Teen	Child	
7:00													
7:15													
7:30													
7:45													
8:00	33		23		6								
8:15	66		48		23								
8:30	77		54		25								
8:45	30		36		8								
9:00													
9:15													
9:30													
9:45													
<b>AM Totals</b>	<b>206</b>		<b>161</b>		<b>62</b>								
11:30	11		19		4								
11:45	14		10		2								
12:00	7		10										
12:15	13		19										
12:30	15		14		1								
12:45	16		13		4								
13:00	7		11										
13:15	8		3										
<b>Noon Totals</b>	<b>91</b>		<b>99</b>		<b>11</b>								
14:00													
14:15													
14:30													
14:45													
15:00	18		27		6								
15:15	37		58		13								
15:30	17		23		4								
15:45	18		23										
16:00	17		17										
16:15	10		22										
16:30	22		28		1								
16:45	14		30										
17:00													
17:15													
17:30													
17:45													
18:00													
18:15													
18:30													
18:45													
19:00													
19:15													
19:30													
19:45													
20:00													
20:15													
20:30													
20:45													
<b>PM Totals</b>	<b>153</b>		<b>228</b>		<b>24</b>								
<b>Totals</b>	<b>450</b>		<b>488</b>		<b>97</b>								
<b>North Crosswalk =</b>									<b>97</b>	<b>South Crosswalk =</b>			

**Konihowski Road & Carr Crescent / Bourgonje Crescent (North)**

Prepared By: Mariniel Flores Date: Wednesday, January 18, 2017

Location & Roadway Classification: Konihowski Rd (Major Collector) & Carr Cres / Bourgonje Cres (N) (Local)  
Date of Count: Day of wk: Wednesday Mth, Day, Yr: Wednesday, September 28, 2016  
Weather: 13.6°C  
Traffic Control Devices: Two-way yield signs on Carr Cres / Bourgonje Cres assigning right-of-way to Konihowski Rd  
Current Pedestrian Control: None  
Other Notes: \_\_\_\_\_

Number of travel lanes passing through the crosswalk(s) 2 lanes

Is there a physical median in this crosswalk(s)? n (y or n)

Speed limit (or 85th percentile speed) 50 km/h

- 85th percentile (check one)
- Posted Limit

Distance to nearest protected crosswalk 220 m

Location: Konihowski Rd & Carr Cres / Bourgonje Cres (S)  
Type: Yield sign, zebra crosswalk

Is the orientation of this crosswalk(s) N-S? n (y or n)

Duration of pedestrian count 5 hrs

Elementary:	8	Total Warranted PC Points:		or	/ period
High School:		Highest PC point value:	518	at	
Adult:		Active Ped Corridor Points:			
Senior:		Pedestrian Actuated Signal Points:	15		
Vehicles passing through crosswalk(s):	757				

**ACTIVE PEDESTRIAN CORRIDOR NOT WARRANTED  
PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED**

**\*\*Install device at the South Crosswalk \*\***

(Note: Standard and Zebra crosswalks can be installed on both sides if pedestrian volumes are approximately equal.)

Time (15 minute intervals)	Vehicle Counts				Pedestrian Counts								
	SB	WB	NB	EB	North Crosswalk				South Crosswalk				
					Child	Teen	Adult	Senior / Impaired	Senior / Impaired	Adult	Teen	Child	
7:00													
7:15													
7:30													
7:45													
8:00	16	5	21										
8:15	47	4	40										
8:30	45	2	39	2									
8:45	24	3	44										
9:00													
9:15													
9:30													
9:45													
<b>AM Totals</b>	<b>132</b>	<b>14</b>	<b>144</b>	<b>2</b>									
11:30	2		14										
11:45	10	1	11										1
12:00	6		10										
12:15	19	3	12										
12:30	12	2	12										
12:45	3	3	15										
13:00	6	1	7										
13:15	6		10										
<b>Noon Totals</b>	<b>64</b>	<b>10</b>	<b>91</b>										<b>1</b>
14:00													
14:15													
14:30													
14:45													
15:00	15		20										
15:15	15	2	41										
15:30	18	1	22										
15:45	14	2	18	1									4
16:00	18		21										3
16:15	13	2	14										
16:30	15	2	9										
16:45	14	1	22										
17:00													
17:15													
17:30													
17:45													
18:00													
18:15													
18:30													
18:45													
19:00													
19:15													
19:30													
19:45													
20:00													
20:15													
20:30													
20:45													
<b>PM Totals</b>	<b>122</b>	<b>10</b>	<b>167</b>	<b>1</b>									<b>7</b>
<b>Totals</b>	<b>318</b>	<b>34</b>	<b>402</b>	<b>3</b>									<b>8</b>
					<b>North Crosswalk =</b>				<b>South Crosswalk =</b>				<b>8</b>

**Konihowski Road & Garvie Road**

Prepared By: Mariniel Flores Date: Wednesday, January 18, 2017

Location & Roadway Classification: Konihowski Rd (Major Collector) & Garvie Rd (Major Collector)  
Date of Count: Day of wk: Wednesday Mth, Day, Yr: Wednesday, September 21, 2016  
Weather: Warm  
Traffic Control Devices: One stop on Garvie Rd assigning right-of-way to Konihowski Rd  
Current Pedestrian Control: Zebra crosswalk  
Other Notes: \_\_\_\_\_

Number of travel lanes passing through the crosswalk(s) 2 lanes

Is there a physical median in this crosswalk(s)? n (y or n)

Speed limit (or 85th percentile speed) 30 km/h

- 85th percentile (check one)
- Posted Limit

Distance to nearest protected crosswalk 100 m

Location: Konihowski Rd & Pezer Cres (S)  
Type: Stop sign, Active Pedestrian Corridor

Is the orientation of this crosswalk(s) N-S? n (y or n)

Duration of pedestrian count 5 hrs

Elementary:	245	Total Warranted PC Points:	55,594	or	13,899	/ period
High School:		Highest PC point value:	19,270	at		
Adult:		Active Ped Corridor Points:	4			
Senior:		Pedestrian Actuated Signal Points:	41			
Vehicles passing through crosswalk(s):	1,197					

**ACTIVE PEDESTRIAN CORRIDOR WARRANTED**  
**PEDESTRIAN ACTUATED SIGNAL NOT WARRANTED**

**\*\*Install device at the South Crosswalk \*\***

(Note: Standard and Zebra crosswalks can be installed on both sides if pedestrian volumes are approximately equal.)

Time (15 minute intervals)	Vehicle Counts				Pedestrian Counts								
	SB	WB	NB	EB	North Crosswalk				South Crosswalk				
					Child	Teen	Adult	Senior / Impaired	Senior / Impaired	Adult	Teen	Child	
7:00													
7:15													
7:30													
7:45													
8:00	33		32	9	4								4
8:15	57		70	9									49
8:30	33		72	6	1								15
8:45	28		24	1	1								3
9:00													
9:15													
9:30													
9:45													
<b>AM Totals</b>	151		198	25	6								71
11:30	9		21	2	1								1
11:45	17		14										3
12:00	13		20		3								9
12:15	12		34	1	7								3
12:30	7		11	3	4								11
12:45	18		10	4									
13:00	9		14	2									3
13:15	6		15	1									
<b>Noon Totals</b>	91		139	13	15								30
14:00													
14:15													
14:30													
14:45													
15:00	22		50	8	1								61
15:15	47		65	13	3								29
15:30	28		36	4									11
15:45	21		38	4	1								6
16:00	16		33										3
16:15	19		45	2									
16:30	17		44	2									2
16:45	20		43	3									4
17:00													
17:15													
17:30													
17:45					2								
18:00													
18:15													
18:30													
18:45													
19:00													
19:15													
19:30													
19:45													
20:00													
20:15													
20:30													
20:45													
<b>PM Totals</b>	190		354	36	7								116
<b>Totals</b>	432		691	74	28								217
<b>North Crosswalk =</b>									<b>28</b>	<b>South Crosswalk =</b>			<b>217</b>

## APPENDIX D: TRAFFIC SIGNAL ASSESSMENTS

**Central Avenue & Konihowski Road**

Main Street (name)	Central Ave
Side Street (name)	Konihowski Rd
Quadrant / Int #	

for Warrant Calculation Results, please hit 'Page Down'

Direction (EW or NS)	NS
	EW
Comments	MF

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2017 Jan 19, Thurs
Count Date:	2016 Nov 22, Tues
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStrea m Signal (m)	# of Thru Lanes
Central Ave NB				1			1	300	1
Central Ave SB		1		1				1,470	1
Konihowski Rd WB		1					1		
Konihowski Rd EB									

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

	n
	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Central Ave	NS	50	2.0%	n	3.6
Konihowski Rd	EW		2.0%	n	

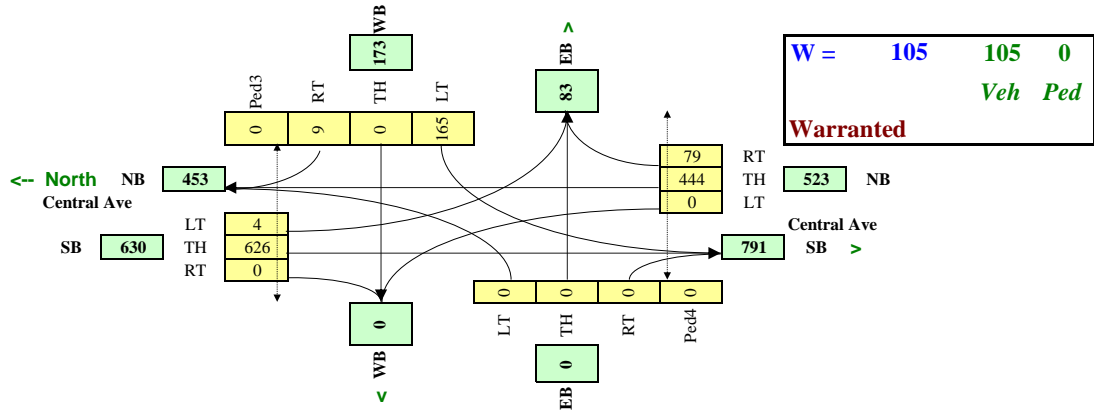
Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	230,000
Central Business District	(y/n)	n

Traffic Input	NB			SB			WB			EB			Ped1	Ped2	Ped3	Ped4	
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	NS W Side	NS E Side	EW N Side	EW S Side	
7:00 - 8:00	0	207	25	0	1129.5	0	243	0	16	0	0	0	0	0	0	0	0
8:00 - 9:00	0	265.5	66	7	921	0	249	0	13	0	0	0	0	0	0	0	0
11:30 - 12:30	0	297	67	4	351	0	108	0	9	0	0	0	0	0	0	0	0
12:30 - 13:30	0	261	55	2	339	0	135	0	11	0	0	0	0	0	0	0	0
16:00 - 17:00	0	812	129	7	525	0	128	0	2	0	0	0	0	0	0	0	0
17:00 - 18:00	0	824	131	5	492	0	126	0	1	0	0	0	0	0	0	0	0
Total (6-hour peak)	0	2,666	473	25	3,758	0	989	0	52	0	0	0	0	0	0	0	0
Average (6-hour peak)	0	444	79	4	626	0	165	0	9	0	0	0	0	0	0	0	0

**Average 6-hour Peak Turning Movements**

Konihowski Rd

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





**Central Avenue & Garvie Road**

Main Street (name)	Central Ave	Direction (EW or NS)	NS
Side Street (name)	Garvie Rd	Direction (EW or NS)	EW
Quadrant / Int #		Comments	MF

for Warrant Calculation Results, please hit 'Page Down'

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2017 Jan 19, Thurs
Count Date:	2016 Nov 15, Tues
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStreet Signal (m)	# of Thru Lanes
Central Ave	NB			1			1	840	1
Central Ave	SB	1		1				1,140	1
Garvie Rd	WB	1					1		
Garvie Rd	EB								

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

Demographics		
Elem. School/Mobility Challenges	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	230,000
Central Business District	(y/n)	n

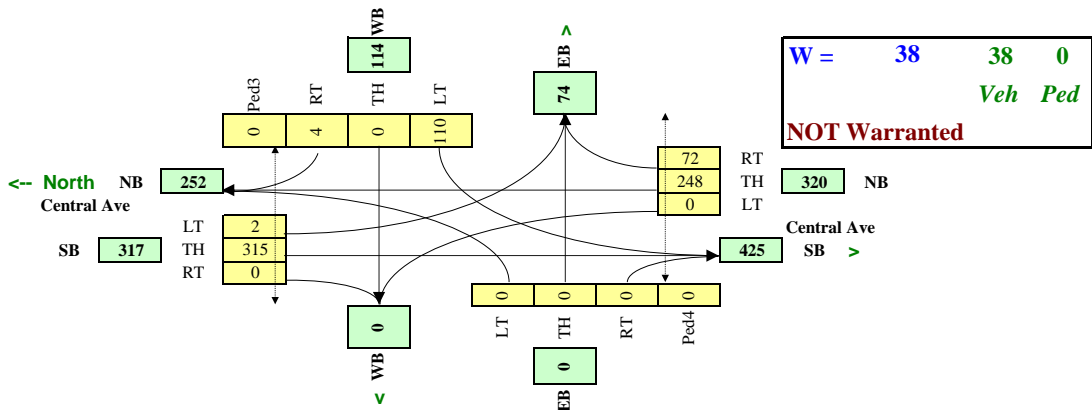
Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Central Ave	NS	50	2.0%	n	3.6
Garvie Rd	EW		2.0%	n	

Traffic Input	NB			SB			WB			EB			Ped1	Ped2	Ped3	Ped4
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	NS W Side	NS E Side	EW N Side	EW S Side
7:00 - 8:00	0	153	18	0	579	0	197	0	0	0	0	0	0	0	0	0
8:00 - 9:00	0	155	47	5	458	0	180	0	9	0	0	0	0	0	0	0
11:30 - 12:30	0	154	51	3	153	0	56	0	4	0	0	0	0	0	0	0
12:30 - 13:30	0	175	52	2	151	0	63	0	4	0	0	0	0	0	0	0
16:00 - 17:00	0	413	130	1	253	0	93	0	2	0	0	0	0	0	0	0
17:00 - 18:00	0	440	134	3	294	0	73	0	2	0	0	0	0	0	0	0
Total (6-hour peak)	0	1,490	432	14	1,888	0	662	0	21	0	0	0	0	0	0	0
Average (6-hour peak)	0	248	72	2	315	0	110	0	4	0	0	0	0	0	0	0

**Average 6-hour Peak Turning Movements**

Garvie Rd

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



**Central Avenue & Somers Road**

Main Street (name)	Central Ave	Direction (EW or NS)	NS
Side Street (name)	Somers Rd	Direction (EW or NS)	EW
Quadrant / Int #		Comments	MF

for Warrant Calculation Results, please hit 'Page Down'

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2017 Jan 19, Thurs
Count Date:	2016 Nov 15, Tues
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStreet Signal (m)	# of Thru Lanes
Central Ave	NB			1			1	1,410	1
Central Ave	SB	1		1				550	1
Somers Rd	WB	1					1		
Somers Rd	EB								

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

	n
--	---

Demographics		
Elem. School/Mobility Challenges	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	230,000
Central Business District	(y/n)	n

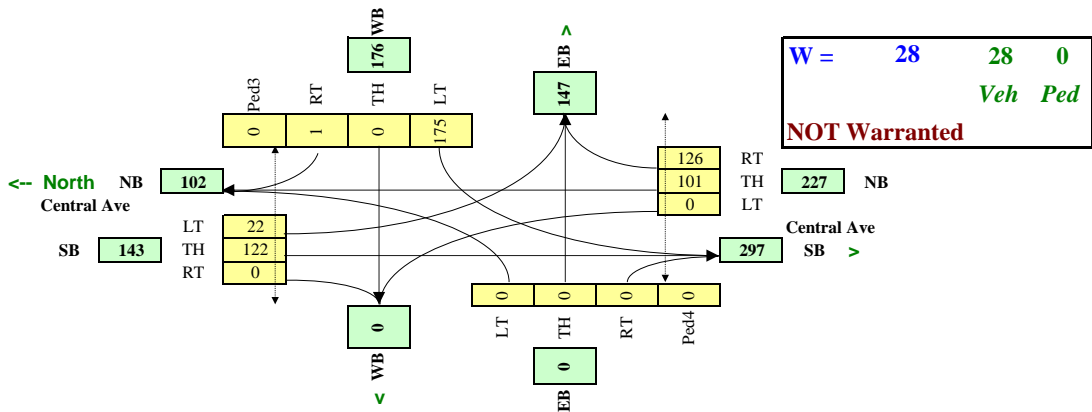
Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Central Ave	NS	50	2.0%	n	3.6
Somers Rd	EW		2.0%	n	

Traffic Input	NB			SB			WB			EB			Ped1	Ped2	Ped3	Ped4
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	NS W Side	NS E Side	EW N Side	EW S Side
7:00 - 8:00	0	62	38	0	333	0	233	0	0	0	0	0	0	0	0	0
8:00 - 9:00	0	79	51	2	167	0	289	0	1	0	0	0	0	0	0	0
11:30 - 12:30	0	54	81	4	43	0	87	0	2	0	0	0	0	0	0	0
12:30 - 13:30	0	61	90	2	33	0	97	0	1	0	0	0	0	0	0	0
16:00 - 17:00	0	172	248	11	61	0	147	0	3	0	0	0	0	0	0	0
17:00 - 18:00	0	178	245	110	94	0	196	0	1	0	0	0	0	0	0	0
Total (6-hour peak)	0	606	753	129	731	0	1,049	0	8	0	0	0	0	0	0	0
Average (6-hour peak)	0	101	126	22	122	0	175	0	1	0	0	0	0	0	0	0

**Average 6-hour Peak Turning Movements**

Somers Rd

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



## APPENDIX E: COLLISION ANALYSIS

Street 1	Street 2	UGRID	2011	2012	2013	2014	2015	Total Number of Collisions (2011 - 2015)	Total Number of Collisions (2015)	Right Angle, Left Turn & Right Turn Collisions Only (2011 - 2015)	Right Angle, Left Turn & Right Turn Collisions Only (2015)	Average Number of Collisions (2011 - 2015)
Konihowski Rd	Somers Rd	SKN3-23	2	0	4	2	1	9	1	2	0	2
Central Ave	Garvie Rd	SKN3-1	2	2	0	2	1	7	1	5	1	1
Central Ave	Somers Rd	SKN3-19	0	2	1	2	2	7	2	2	1	1
Central Ave	2500 Garvie - Somers	SKN3-10	2	0	1	0	3	6	3	0	0	1
Central Ave	Attridge - Konihowski	SKN4-1	0	1	2	0	2	5	2	1	0	1
Haslam Cr	Haslam Way 1500	SKN4-19	1	0	1	1	1	4	1	2	1	1
Konihowski Rd	Garvie Rd - Laycoe	SKN4-2	0	3	0	1	0	4	0	1	0	1
Rever Rd	100 Attridge - Haslam / Fairbrother	SKN4-32	0	0	1	0	3	4	3	1	0	1
Central Ave	Konihowski Rd	SKN4-7	2	1	0	1	0	4	0	1	0	1
Bourgonje Crt	100	SKN2-16	0	1	1	1	0	3	0	1	0	1
Bourgonje W / Carr W	Konihowski Rd	SKN2-3	0	0	2	0	1	3	1	1	0	1
Central Ave	North of Agra Rd	SKN2-62	0	2	1	0	0	3	0	0	0	1
Garvie Rd	Kristjanson Rd	SKN3-14	0	0	1	0	2	3	2	0	0	1
Laycoe Cr	Laycoe Crt	SKN4-26	2	0	1	0	0	3	0	0	0	1
Haslam Cres	Haslam 900 - Rever	SKN4-4	0	0	0	3	0	3	0	1	0	1
Fedoruk Dr	Konihowski Rd	SKO2-11	0	0	0	1	2	3	2	0	0	1
Konihowski Rd	Pobran Cr W	SKN2-1	0	1	0	1	0	2	0	0	0	0
Konihowski Rd	Pezer Cr S	SKN3-11	0	0	1	0	1	2	1	0	0	0
Pezer Cr	500	SKN3-15	0	2	0	0	0	2	0	0	0	0
Konihowski Rd	700	SKN3-25	1	0	0	0	1	2	1	1	1	0
Konihowski Rd	Pezer - Garvie	SKN3-40	0	1	0	0	1	2	1	0	0	0
Garvie Rd	Konihowski Rd	SKN3-9	0	0	0	2	0	2	0	1	0	0
Central Ave	North of Attridge	SKN4-1	1	0	1	0	0	2	0	0	0	0
Konihowski Rd	Rever Rd	SKN4-12	1	0	1	0	0	2	0	0	0	0
Fairbrother N	Haslam Cr / Rever Rd	SKN4-13	0	0	1	1	0	2	0	1	0	0
Rever Rd	Haslam / Fairbrother S - Haslam	SKN4-16	0	1	1	0	0	2	0	1	0	0
Haslam Cr	300	SKN4-18	0	1	1	0	0	2	0	0	0	0
Laycoe Cr	200	SKN4-22	0	0	2	0	0	2	0	0	0	0
Laycoe Lane	300	SKN4-23	0	0	1	1	0	2	0	0	0	0
Fairbrother Cr / Haslam St	1000 Fairbrother Cr - Fairbrother	SKN4-28	0	2	0	0	0	2	0	0	0	0
Fairbrother 100	Fairbrother Terr 200 - Rever	SKN4-34	1	1	0	0	0	2	0	0	0	0
Fairbrother Cr	Fairbrother Crt	SKN4-47	0	0	0	1	1	2	1	0	0	0
Konihowski Rd	200 Laycoe - Laycoe	SKN4-8	1	1	0	0	0	2	0	1	0	0
Konihowski Rd	1500	SKN2-13	0	1	0	0	0	1	0	0	0	0
Carr Cr	100	SKN2-14	0	1	0	0	0	1	0	0	0	0
Carr Cr	Carr Ln	SKN2-17	0	0	1	0	0	1	0	0	0	0

Street 1	Street 2	UGRID	2011	2012	2013	2014	2015	Total Number of Collisions (2011 - 2015)	Total Number of Collisions (2015)	Right Angle, Left Turn & Right Turn Collisions Only (2011 - 2015)	Right Angle, Left Turn & Right Turn Collisions Only (2015)	Average Number of Collisions (2011 - 2015)
Pezer Cr	600	SKN3-18	1	0	0	0	0	1	0	0	0	0
Garvie Rd	200	SKN3-2	0	0	0	0	1	1	1	0	0	0
Pezer Cove	Mid Block	SKN3-20	1	0	0	0	0	1	0	0	0	0
Pezer Cr	100	SKN3-24	0	0	1	0	0	1	0	0	0	0
Beerling Cr	200	SKN3-27	0	0	0	0	1	1	1	0	0	0
Beerling Cr	300 At Walkway	SKN3-28	0	0	1	0	0	1	0	0	0	0
Kristjanson Rd	Mid Block	SKN3-31	1	0	0	0	0	1	0	0	0	0
Konihowski Rd	900 Beerling Cr - Beerling Cr	SKN3-36	1	0	0	0	0	1	0	0	0	0
Le May Cr	100	SKN3-38	0	0	0	1	0	1	0	0	0	0
Konihowski Rd	Somers - Beerling Cr	SKN3-39	0	1	0	0	0	1	0	0	0	0
Garvie Rd	400 Scissons Cr - Scissons Cr	SKN3-6	0	0	0	0	1	1	1	0	0	0
Fairbrother Cr / Haslam St	Rever Rd	SKN4-14	0	0	0	0	1	1	1	1	1	0
Konihowski Rd	200 Haslam - Rever	SKN4-20	0	0	0	0	1	1	1	0	0	0
Central Ave	Garvie Rd - Konihowski	SKN4-21	0	0	1	0	0	1	0	0	0	0
Laycoe Cr S Leg	Konihowski Rd	SKN4-24	1	0	0	0	0	1	0	0	0	0
McWillie Ave	500 Coben Cr - Coben Cr	SKN4-35	0	0	0	1	0	1	0	0	0	0
Konihowski Rd	300	SKN4-36	0	0	0	0	1	1	1	0	0	0
Haslam Way	1500	SKN4-37	0	0	0	1	0	1	0	0	0	0
Laycoe Cr	900	SKN4-40	0	0	0	1	0	1	0	0	0	0
Fairbrother Cr	700	SKN4-41	0	0	0	0	1	1	1	0	0	0
Fairbrother Cr	1400	SKN4-42	0	0	0	0	1	1	1	0	0	0
Scissons Terr	300	SKN4-44	0	0	0	1	0	1	0	0	0	0
McWillie Ave	Coben Cr - Garvie Rd	SKN4-46	0	0	1	0	0	1	0	0	0	0
Haslam Way	Konihowski Rd / McWillie Ave	SKN4-9	0	1	0	0	0	1	0	1	0	0
Carr Lane 200	Carr Cr 300 - Carr Cr 600	SKO2-1	0	0	1	0	0	1	0	0	0	0
Fedoruk Rd	Zary Rd	SKO2-13	0	0	0	0	1	1	1	0	0	0
Carr Cr	600	SKO2-2	0	0	0	1	0	1	0	0	0	0

APPENDIX F: PUBLIC MEETING #2 – JANUARY 26, 2017 MINUTES

**Silverspring Neighbourhood Traffic Review**  
**Thursday, January 26, 2017, 7:00 PM – 9:00 PM**  
**Ebenezer Baptist Church (107 McWillie Avenue)**

**Agenda**

1. Welcome & Introductions
2. Traffic Management Presentation
3. Draft Plan (Table Group) Discussion – Seeking Your Input
4. Next Steps – Where From Here?
5. Questions & Answers

**1. Welcome & Introductions**

(Presented by Mitch Riabko and Kathy Dahl, Facilitators)

**2. Traffic Management Presentation – Silverspring Neighbourhood Traffic Review**

(Presented by Mariniel Flores, P.Eng., Transportation Engineer)

- Presentation Outline
  - Neighbourhood Traffic Review Process
  - Silverspring Review Schedule
  - What We Heard
  - What We Did
  - What We Propose
- Neighbourhood Traffic Review Process
  - August 2013 – New process
  - Mandate – Improve safety for all road users within neighbourhoods, reduce traffic volumes, slow vehicular speeds, improve pedestrian crossings & intersections where necessary
  - 2014 – Reviewed 11 neighbourhoods
  - 2015 – Reviewed 8 neighbourhoods
  - 2016 – Silverspring, Sutherland, Parkridge, Willowgrove, Stonebridge, Hampton Village, Grosvenor Park, Lakeridge
- Silverspring Review Schedule
  - Stage 1 – Identify issues & possible solutions through community consultation (May 2016 to January 2017)
  - Stage 2 – Develop a draft traffic plan
  - Stage 3 – Present draft traffic plan to community for feedback (January 2017)
  - Stage 4 – Implement changes over time (Beginning Spring 2017)
- What We Heard
  - Speeding Concerns
    - Konihowski Rd
    - Rever Rd

- Garvie Rd
  - Shortcutting Concerns
    - Konihowski Rd
  - Pedestrian Safety & Intersection Concerns
    - Konihowski Rd & Carr Cres (N)
    - In front of Mother Teresa School
    - Konihowski Rd & Garvie Rd
    - Konihowski Rd & Rever Rd
    - Attridge Dr & Rever Rd
    - Intersections along Central Ave (Konihowski Rd, Garvie Rd, Somers Rd, Fedoruk Dr)
  - Other Concerns
    - Missing sidewalks
    - Lighting
    - Road condition
    - Snow removal
    - Excessive vehicle noise
    - Attridge Dr & Central Ave
- What We Did
  - Compiled Information Received
    - Past studies
    - Comments from initial meeting
    - Resident responses (phone calls, emails, letters)
    - Comments from Shaping Saskatoon
  - Collected Data
    - 10 intersection/pedestrian counts
    - 6 – 3-day/7-day traffic counts (24 hour) & speed measurements
    - Collision data
  - Site Visits / Field Reviews
  - Assessed Concerns
  - Generated Proposed Recommendations
- What We Propose
  - Standard Crosswalks
  - Zebra Crosswalk
  - Raised Median Islands
  - Yield Sign
  - Stop Signs
  - Active Pedestrian Corridor
  - Traffic Signals

### **3. Draft Plan (Table Group) Discussion**

- Residents were divided into small groups to discuss the proposed recommendations



\*\*\*Refer to separate attachment for small group comments\*\*\*

#### **4. Next Steps**

(Presented by Mariniel Flores, P.Eng., Transportation Engineer)

1. Send comments no later than February 24, 2017
2. Additional public input via City on-line Community Engagement webpage no later than February 24, 2017 at <http://shapingsaskatoon.ca/discussions/silverspring-neighbourhood-traffic-review>
3. Additional consultation if required
4. Present Traffic Plan to Transportation Committee
5. Present Traffic Plan to City Council for approval
  - a. If at any point throughout the process you don't agree with the recommendations, there are opportunities to voice your opinion. You can reserve five minutes to speak during the Transportation Committee or City Council meetings.
6. What happens after City Council approval?
  - a. Recommendations are implemented. Traffic calming devices are installed on a temporary basis using rubber curbs for a trial period of at least one year so we can determine if they are effective. Please let us know if something is not working or needs to be changed or removed.

#### **5. Questions & Answers**

Q: Can speed humps/bumps be installed past schools?

A: Speed humps/bumps are not recommended unless there are excessive speeds (i.e., 30% higher than posted speed limit). Speed humps/bumps are also not recommended on emergency routes. There are also concerns regarding noise and vibrations from residents adjacent to the speed humps/bumps.

Q: Can speed humps/bumps be installed as a temporary trial?

A: I'm not sure but we've received feedback on the speed humps/bumps that are installed on 37<sup>th</sup> Street.

Comment: Vehicles are turning left on Central Ave into the dog park. This access should be moved. Vehicles turn around the corner and have to stop to wait for these vehicles turning into the dog park.

Q: Are sound walls going to be considered? Will there be a sound wall near Central Avenue & Rever Rd?

A: There is a sound wall monitoring list. We will check the list.

Councillor Jeffries: Sound walls will be built in certain locations as part of the North Commuter Parkway Project.

Q: When will the sound walls be built?

Councillor Jeffries: The contractor has until October 2018. It is a P3 project so there is flexibility. The sound walls could be built in 2017.

Q: Are there different styles of sound walls?

Councillor Jeffries: The style of sound walls is not specified in the P3 contract. It is an aesthetically pleasing product at a good price.

Comment: Look at the impact of the double left-turning lane at the intersection of Attridge Dr & Central Ave intersection.

A: We will follow up.

Comment: Mother Teresa School has no active crosswalks.

A: There are issues with the mid-block crossing. I have contacted the school board.

Comment: It is not busy at Konihowski Rd & Pezer Cres (S).

Q: Where do we find information about the Attridge Dr & Central Ave intersection and North Commuter Parkway project?

A: The information can be sent to you and will be posted on the Shaping Saskatoon website.

The link is <https://www.saskatoon.ca/business-development/major-projects/current-projects/north-commuter-parkway-traffic-bridge-replacement-project>.

Comment: It is difficult to make a southbound to westbound turn because it is too tight. Install a 40kph sign.

Q: Is there plans for a median along Central Ave?

A: The plans are on the website.

*The link is*

[https://www.saskatoon.ca/sites/default/files/documents/ncp\\_functional\\_plan\\_20151014.pdf](https://www.saskatoon.ca/sites/default/files/documents/ncp_functional_plan_20151014.pdf).

Q: Will construction on Attridge Dr & Central Ave start this summer? Is there a way to get out of Silverspring? There will be construction at other locations at the same time.

A: A detour plan will be developed.

Comments: There are high rates of speeds in the neighbourhood.

A: We have completed speed studies. We recommend setting the pace (i.e., pace car), increased enforcement, and information has been passed on to Saskatoon Police Services.

Comment: There is lots of speeding. Young drivers and cell phones are a problem. There are a lot of young kids. One kid drove up onto the fire hydrant.

Comment: I live on Le May Cres and kids do wheelies on the ice. I called Saskatoon Police Services and told their parents.

Q: Is anything being done on Fedoruk Dr? There is lots of traffic out of Evergreen.

Councillor Jeffries: As part of the North Commuter Parkway Project, a traffic study was completed at Central Ave & Fedoruk Dr.

Comment: Consider 30kph near playgrounds and parks.

Councillor Jeffries: That is a decision for City Council and will generate a lot of discussion – is 30kph the right number, should it be all year round and all day?

Comment: Please update the website to include information about the Central Ave & dog park access.

Q: I bike to work. I want to go north at Attridge Dr & Central Ave. Will there be anything going north?

Councillor Jeffries: There will be a multi-use pathway from Attridge Dr to the North Commuter Parkridge bridge.

Q: When will the recommendations be installed?

A: Spring/summer 2017

Q: When the report goes to City Council, will we be notified?

A: The Community Association will be notified.

Councillor Jeffries: A report on speed humps/bumps will be presented at the Transportation Committee meeting. I will be advocating to try them out. There is a lot of work ahead (i.e., traffic signal at Fedoruk Dr & Central Ave, traffic signal at Central Ave & Konihowski Rd, construction at Highway 5 & McOrmond Dr). Thank you for your patience.

### **List of Representatives**

- Mitch Riabko, Kathy Dahl – Great Works Consulting
- Mariniel Flores, Lanre Akindipe, David LeBoutillier, Justine Marcoux – City of Saskatoon, Transportation & Utilities

**Silverspring Neighbourhood Traffic Review: Table Group Discussions**

Item	Location	Recommendation	Reason	Group 1: Lanre Akindipe	Group 2: David LeBoutillier	Group 3: Justine Marcoux	Group 4: Mariniel Flores
1	Konihowski Rd & Carr Cres (N) / Bourgonje Cres (N)	Install standard crosswalk on south leg	Improve pedestrian safety	Okay	Okay	Street lighting needed; Zebra crosswalk suggested	Okay with standard crosswalk; Some want a stop sign; Poor road condition
2	Konihowski Rd & Le May Cres (S)	Upgrade standard crosswalk to zebra crosswalk	Improve pedestrian safety	Between Items 1 and 2 (Carr Cres and Le May Cres) to reduce speed	Okay		Okay
3	Konihowski Rd & Pezer Cres (N)	Install median island on south leg of Konihowski Rd	Reduce driver speed	Parking restrictions from intersection	Okay		Some want an Active Pedestrian Corridor; Some do not want the median island
4	Konihowski Rd & Garvie Rd	Install Active Pedestrian Corridor	Improve pedestrian safety	Why install two Active Pedestrian Corridors close to each other? Put it at Konihowski Rd & Pezer Cres (N)	Okay; Move to the north	Concerned about distance from Pezer Cres (S) since it is very close; Maybe consider installing this one at Pezer Cres (N)	Okay; Improve snow removal on north side since it is very narrow
5	Konihowski Rd & Rever Rd	Install stop sign on median islands on west leg of Konihowski Rd and on south leg of Rever Rd	Enhance visibility of stop signs	Take a look at this location again; More enforcement needed	Okay		Salting & sanding needed; Most are okay with this recommendation; Two residents did not like it
6	Rever Rd & Haslam Cres (N) / Fairbrother Cres (N)	Install median island on north leg of Rever Rd	Reduce driver speed	Okay	Okay; Consider an east-west crosswalk		Most are okay with this recommendation; Few are not okay with this recommendation
7	Rever Rd [Haslam Cres (N) / Fairbrother Cres (N) to Haslam St / Fairbrother Cres (S)]	Install mid-block median island on Rever Rd	Reduce driver speed	Okay	No consensus; Might be too much; Maybe lighted crosswalks north & south		Too excessive; Remove this recommendation
8	Rever Rd & Haslam St / Fairbrother Cres (S)	Install standard crosswalk on south leg; Install median island on north leg of Rever Rd	Improve pedestrian safety; Reduce driver speed	Okay	Okay; Put money into Items 6 and 8	Zebra crosswalk suggested	Okay
9	Haslam Cres & Haslam St	Install yield sign on Haslam St assigning right-of-way to Haslam Cres	Improve intersection safety	Haslam Crt & Haslam Pl needs a yield sign	Okay; Look at east/west leg on Haslam Cres to alternate yield signs		Okay
10	Konihowski Rd & Haslam Pl / McWillie Ave	Install median island on east leg of Konihowski Rd	Reduce driver speed		Okay; Consider crosswalk on north, south and east sides		Okay; Suggest zebra crosswalk on the east leg
11	Central Ave & Konihowski Rd	Install traffic signals	Improve traffic flow	More traffic signals are needed north of Konihowski Rd; Traffic signal at Somers Rd is preferred since it makes a break in traffic flow or maybe a four-way stop in the interim	No consensus; Some wants lights now; Some wants lights when Central Ave is twinned	People will shortcut down to McWillie Ave to get to Konihowski Rd instead of waiting on Garvie Rd; All residents to the north (including Evergreen) will use Konihowski Rd (past the school) to get out and this will lead to shortcutting through the neighbourhood; Install traffic signal at Central Ave & Somers Rd to avoid shortcutting being created through the neighbourhood due to only one traffic signal at Central Ave & Konihowski Rd	Okay as long as it is coordinated with other traffic signals

**Additional Comments**

Item	Location	Comments
1	Central Ave	Reduce speed on Central Ave north of traffic lights; Sound walls wanted due to noise on Central Ave; Merging into one lane north of Attridge Dr is dangerous with so many vehicles; Access to dog park is too close to Attridge Dr; Issues with people turning in
2	Attridge Dr & Central Ave	Dual left turns onto Central Ave should have been extended; Dual left turn lanes should be one lane at least for now; Issues with double turning lanes (westbound to northbound) from Attridge Dr & Central Ave; Traffic will get backed up on Central Ave northbound
3	Central Ave & Somers Rd	Crossing suggested in the future to connect to the multi-use pathway or bike to Attridge Dr; Temporary concrete blocks narrow road making it difficult to turn left from Somers Rd to Central Ave; Want traffic signals
4	Attridge Dr & Rever Rd	Long waits; Detector doesn't work; Vehicle doesn't move far enough ahead to get detected; Lots of left turns
5	Central Ave & Garvie Rd	Want traffic signals
6	General	Suggesting "No U-Turns in Schools" signage; Mini-roundabout suggested at Somers Rd and Konihowski Rd; Police enforcement on Central Ave, Attridge Dr and local streets; Was traffic data collected after Fedoruk Dr was opened? If not, that will change the results of the traffic signal warrants.

## APPENDIX G: DECISION MATRIX

Item	Location	Recommendation	Reason	Group 1: Lanre Akindipe	Group 2: David LeBoutillier	Group 3: Justine Marcoux	Group 4: Mariniel Flores	Decision
1	Konihowski Rd & Carr Cres (N) / Bourgonje Cres (N)	Install standard crosswalk on south leg	Improve pedestrian safety	Okay	Okay	Street lighting needed; Zebra crosswalk suggested	Okay with standard crosswalk; Some want a stop sign; Poor road condition	Carried
2	Konihowski Rd & Le May Cres (S)	Upgrade standard crosswalk to zebra crosswalk	Improve pedestrian safety	Between Items 1 and 2 (Carr Cres and Le May Cres) to reduce speed	Okay		Okay	Carried
3	Konihowski Rd & Pezer Cres (N)	Install median island on south leg of Konihowski Rd	Reduce driver speed	Parking restrictions from intersection	Okay		Some want an Active Pedestrian Corridor; Some do not want the median island	Carried
4	Konihowski Rd & Garvie Rd	Install Active Pedestrian Corridor	Improve pedestrian safety	Why install two Active Pedestrian Corridors close to each other? Put it at Konihowski Rd & Pezer Cres (N)	Okay; Move to the north	Concerned about distance from Pezer Cres (S) since it is very close; Maybe consider installing this one at Pezer Cres (N)	Okay; Improve snow removal on north side since it is very narrow	Removed
5	Konihowski Rd & Rever Rd	Install stop sign on median islands on west leg of Konihowski Rd and on south leg of Rever Rd	Enhance visibility of stop signs	Take a look at this location again; More enforcement needed	Okay		Salting & sanding needed; Most are okay with this recommendation; Two residents did not like it	Carried
6	Rever Rd & Haslam Cres (N) / Fairbrother Cres (N)	Install median island on north leg of Rever Rd	Reduce driver speed	Okay	Okay; Consider an east-west crosswalk		Most are okay with this recommendation; Few are not okay with this recommendation	Carried
7	Rever Rd [Haslam Cres (N) / Fairbrother Cres (N) to Haslam St / Fairbrother Cres (S)]	Install mid-block median island on Rever Rd	Reduce driver speed	Okay	No consensus; Might be too much; Maybe lighted crosswalks north & south		Too excessive; Remove this recommendation	Removed
8	Rever Rd & Haslam St / Fairbrother Cres (S)	Install standard crosswalk on south leg; Install median island on north leg of Rever Rd	Improve pedestrian safety; Reduce driver speed	Okay	Okay; Put money into Items 6 and 8	Zebra crosswalk suggested	Okay	Carried
9	Haslam Cres & Haslam St	Install yield sign on Haslam St assigning right-of-way to Haslam Cres	Improve intersection safety	Haslam Cr1 & Haslam Pl needs a yield sign	Okay; Look at east/west leg on Haslam Cres to alternate yield signs		Okay	Carried
10	Konihowski Rd & Haslam Pl / McWillie Ave	Install median island on east leg of Konihowski Rd	Reduce driver speed		Okay; Consider crosswalk on north, south and east sides		Okay; Suggest zebra crosswalk on the east leg	Carried
11	Central Ave & Konihowski Rd	Install traffic signals	Improve traffic flow	More traffic signals are needed north of Konihowski Rd; Traffic signal at Somers Rd is preferred since it makes a break in traffic flow or maybe a four-way stop in the interim	No consensus; Some wants lights now; Some wants lights when Central Ave is twinned	People will shortcut down to McWillie Ave to get to Konihowski Rd instead of waiting on Garvie Rd; All residents to the north (including Evergreen) will use Konihowski Rd (past the school) to get out and this will lead to shortcutting through the neighbourhood; Install traffic signal at Central Ave & Somers Rd to avoid shortcutting being created through the neighbourhood due to only one traffic signal at Central Ave & Konihowski Rd	Okay as long as it is coordinated with other traffic signals	Carried

APPENDIX H: ADDITIONAL CONCERNS RECEIVED AFTER PRESENTATION OF DRAFT  
TRAFFIC PLAN



Item	Location	Comments
1	Attridge Dr	Loud and noisy; Construct a sound wall between Central Ave and Rever Rd; Constant traffic
2	Attridge Dr & Central Ave	Dual left turns onto Central Ave should have been extended; Dual left turn lanes should be one lane at least for now; Issues with double turning lanes (westbound to northbound) from Attridge Dr & Central Ave; Traffic will get backed up on Central Ave northbound
3	Attridge Dr & Rever Rd	Long waits; Detector doesn't work; Vehicle doesn't move far enough ahead to get detected; Lots of left turns
4	Central Ave	Reduce speed on Central Ave north of traffic lights; Sound walls wanted due to noise on Central Ave; Merging into one lane north of Attridge Dr is dangerous with so many vehicles; Access to dog park is too close to Attridge Dr; Issues with people turning in
5	Central Ave & Garvie Rd	Want traffic signals
6	Central Ave & Konihowski Rd	Does not want traffic signals at this location
7	Central Ave & Somers Rd	Crossing suggested in the future to connect to the multi-use pathway or bike to Attridge Dr; Temporary concrete blocks narrow road making it difficult to turn left from Somers Rd to Central Ave; Want traffic signals
8	Konihowski Rd	Speeding in the 1300 to 1500 blocks; No obstructions for drivers from Fedoruk Dr to Somers Rd; Place a median island at Le May or Bourgonje intersections; Shortcutting
9	Konihowski Rd & Somers Rd	Speeding - install a roundabout
10	Rever Rd	Speed concern - more policing needed; Noisy
11	General	Suggesting "No U-Turns in Schools" signage; Mini-roundabout suggested at Somers Rd and Konihowski Rd; Police enforcement on Central Ave, Attridge Dr and local streets; Was traffic data collected after Fedoruk Dr was opened? If not, that will change the results of the traffic signal warrants; Raised traffic hump at each of the crosswalks in the school zone; Revise school bus loading zone signs to create additional parent parking; Change bus loading zone signs so they are effective during school months and times only not year-round