

SILVERWOOD HEIGHTS

2017 NEIGHBOURHOOD TRAFFIC REVIEWS



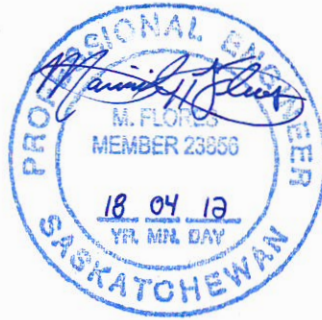
City of Saskatoon
March 14, 2018

Silverwood Heights Neighbourhood Traffic Review

March 14, 2018

Authorization

Prepared By:

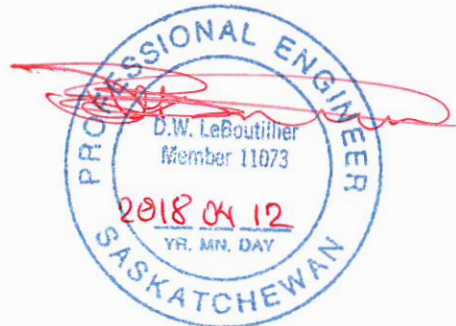


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EXECUTIVE SUMMARY

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 community and stakeholder consultation that provides residents and City of Saskatoon (City) staff the opportunity 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 2017 to identify traffic concerns and potential solutions within the Silverwood Heights 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 November 2017.

A summary of recommended improvements for the Silverwood Heights neighbourhood is included in **Table ES-1**. The summary identifies the locations, recommended improvements, and implementation schedule. 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 (5 years plus). Accordingly, the specific time frame to implement the improvements ranges from 1 to 5 years.

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

Table ES-1: Silverwood Heights Neighbourhood Recommended Improvements

Item	Location	Recommendation	Justification	Implementation Schedule
1	West of Adilman Drive & Davies Road / Spencer Crescent (West)	Relocate 50 kph speed limit sign for eastbound traffic	Improve visibility of speed limit sign to encourage compliance	1 to 2 years
2	Adilman Drive & Neusch Crescent (West) / Egnatoff Crescent (West)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
		Traffic count in spring 2018	Determine if improvements are needed	1 to 2 years
3	Marcotte Crescent (Marcotte Way to Marcotte Road)	Traffic count in spring 2018	Determine if improvements are needed	
4	Goerzen Street & Nordstrum Road	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
5	Russell Road & Girgulis Crescent (North)	Install curb extension on east side of north crosswalk; Upgrade standard crosswalk to zebra crosswalk on the north leg; Provide speed data to Saskatoon Police Service for enforcement	Improve pedestrian safety & reduce speed	
6	Russell Road & Goerzen Street	Upgrade standard crosswalk to zebra crosswalk on the south leg	Improve pedestrian safety	1 to 2 years
7	Russell Road & Davies Road	Upgrade standard crosswalk to zebra crosswalk on the north leg	Improve pedestrian safety	
8	Verbeke Road & Verbeke Court / Verbeke Crescent (West)	Install yield signs assigning right-of-way to Verbeke Road	Improve safety	
9	Verbeke Road & Verbeke Place	Install yield sign assigning right-of-way to Verbeke Road	Improve safety	
10	Verbeke Road & Gathercole Crescent (West)	Install yield sign assigning right-of-way to Verbeke Road	Improve safety	
11	Verbeke Road & Verbeke Crescent (East) / Gathercole Crescent (East)	Install yield signs assigning right-of-way to Verbeke Road	Improve safety	
12	Molloy Street & Bain Crescent (West) / Kindrachuk Crescent (West)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)

Table ES-1 Continued: Silverwood Heights Neighbourhood Recommended Improvements

Item	Location	Recommendation	Justification	Implementation Schedule
25	Lenore Drive & Cypress Court	Upgrade standard crosswalk to zebra crosswalk on the east leg	Improve pedestrian safety	
26	Lenore Drive from Cypress Court to Redberry Road (East)	Install speed display board for westbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 2 years
27	Lenore Drive & Redberry Road (East)	Upgrade standard crosswalk to zebra crosswalk on west leg; Install U-turn prohibited sign for eastbound traffic	Improve pedestrian safety	
28	West side of Wanuskewin Road adjacent to Independent Grocer	Install sidewalk	Improve pedestrian safety	5 years plus

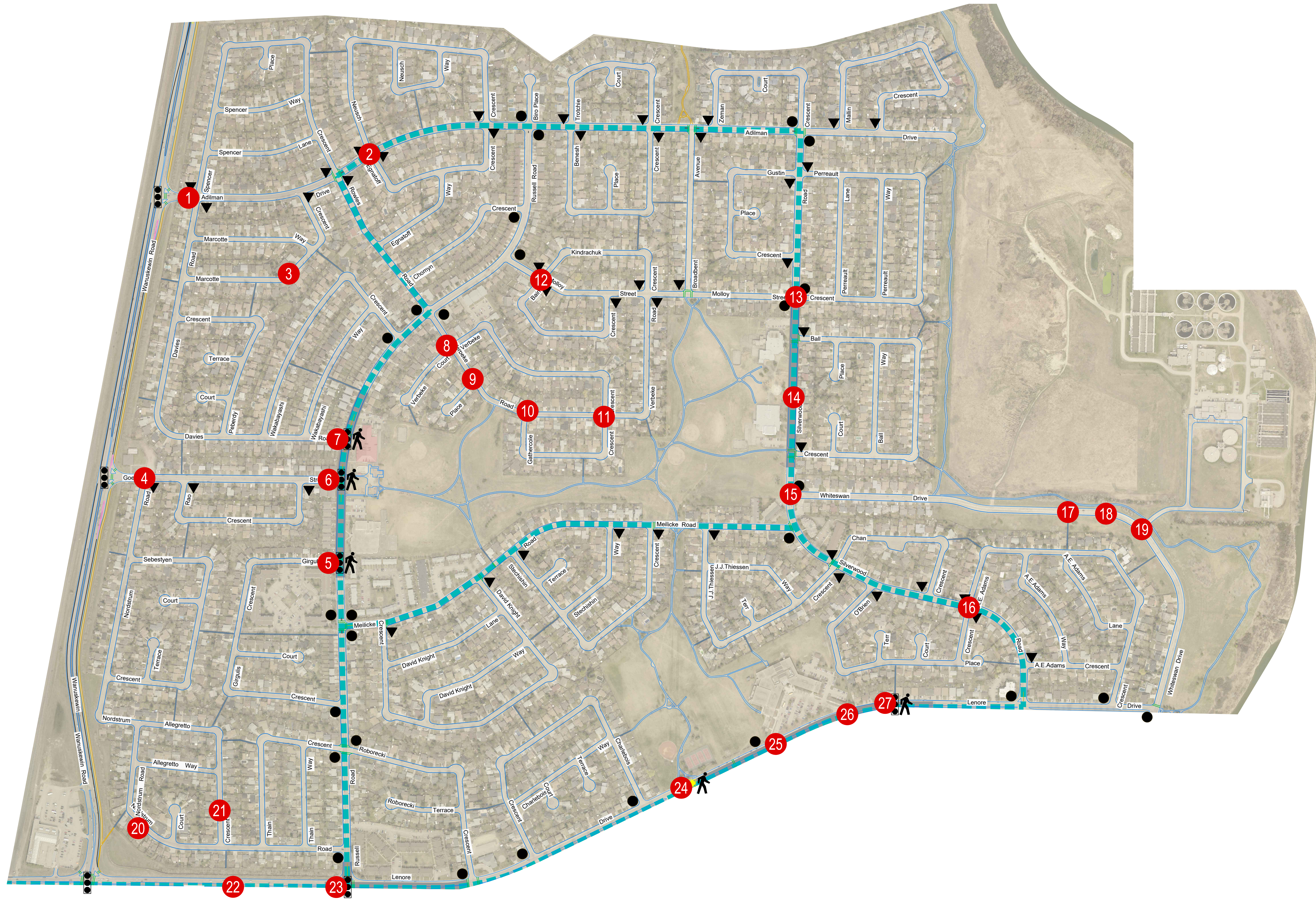
Table ES-1 Continued: Silverwood Heights Neighbourhood Recommended Improvements

Item	Location	Recommendation	Justification	Implementation Schedule
13	Silverwood Road & Molloy Street / Perreault Crescent (South)	Paint stop lines for eastbound and westbound traffic	Improve driver compliance	1 to 2 years
14	Silverwood Road from Ball Crescent (North) to Ball Crescent (South)	Install School Ahead warning sign for southbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	
15	Silverwood Road & Whiteswan Drive	Install median island on north leg; Install curb extension on west side of north crosswalk; Install curb extension on east side of south crosswalk; Provide speed data to Saskatoon Police Service for enforcement	Improve pedestrian safety & reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
16	Silverwood Road & O'Brien Crescent (East) / A.E. Adams Crescent (West)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	
17	Whiteswan Drive & A.E. Adams Crescent Walkway (West)	Install median island	Reduce speed	
18	Whiteswan Drive from A.E. Adams Crescent Walkway (West) to A.E. Adams Crescent Walkway (East)	Install speed display board for eastbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 2 years
19	Whiteswan Drive & Wastewater Treatment Plant Access	Install curb extensions and median island on east leg	Reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
20	Nordstrum Road (Allegretto Way to Nordstrum Court)	Speed assessment in spring 2018	Determine if improvements are needed	1 to 2 years
21	Allegretto Crescent (Allegretto Way to Nordstrum Road)	Speed assessment in spring 2018	Determine if improvements are needed	
22	Lenore Drive (Wanuskewin Road to Russell Road)	Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	
23	Lenore Drive & Russell Road / Primrose Drive	Install U-turn prohibited sign for eastbound traffic	Improve traffic safety	
24	Lenore Drive & La Loche Road	Upgrade standard crosswalk to zebra crosswalk on the east leg; Install U-turn prohibited sign for westbound traffic	Improve pedestrian safety	



LEGEND

- EXISTING STOP SIGN
- ▼ EXISTING YIELD SIGN
- BUS ROUTE
- SCHOOL ZONE
- 🚦 EXISTING TRAFFIC SIGNAL
- 🚦🚶 EXISTING PEDESTRIAN ACTUATED SIGNAL LOCATION
- 🚶 ACTIVE PEDESTRIAN CORRIDOR SIGNAL LOCATION
- # RECOMMENDATIONS



SILVERWOOD HEIGHTS 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 vehicle 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 Plan for the Silverwood Heights neighbourhood.

The Silverwood Heights neighbourhood is located south of the Silverwood Golf Course, east of Wanuskewin Road, north of Lenore Drive and west of the South Saskatchewan River. The land use is mostly residential with schools on Russell Road (Brownell School and St. Angela School), Silverwood Road (Silverwood Heights School and Sister O'Brien School) and Lenore Drive (Marion Graham Collegiate).

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.
- **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 (5 years plus).

This report presents the study findings and recommendations.

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

A public meeting was held on May 16, 2017 to identify traffic concerns within the Silverwood Heights 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.

Concerns for speeding and/or shortcutting were identified at the following locations:

- 100 block of Nordstrum Road – traffic noise
- Adilman Drive – traffic noise
- Adilman Drive & Silverwood Road / Zeman Crescent
- Adilman Drive & Spencer Crescent / Rowles Road
- Adilman Drive & Wanuskewin Road – vehicles speed off Wanuskewin Road onto Adilman Drive
- Allegretto Way/Court – 30 kph sign in the alley is not working
- Davies Road – near misses due to shortcutting and speeding at the corner
- Georzen Street
 - Vehicles turning off of Wanuskewin Road
 - Vehicles overtaking other vehicles due to dashed centreline
 - Traffic noise
 - 30 kph school zone not obeyed
- Lenore Drive
 - Vehicles u-turning at numerous intersections from Wanuskewin Drive to Whiteswan Drive
 - At La Loche Road
 - Many vehicles crossing the single solid yellow line to turn
- Lenore Drive & Cree Crescent – vehicles impeding traffic as they are lined up to complete u-turns to avoid red light camera or congestion on Warman Road
- Lenore Drive & La Loche Road

- Meilicke Road
- Molloy Street
 - At corner of Bain Crescent between Silverwood Road and Russell Road
 - At corner of Silverwood Road
- Nordstrum Road along curve in the winter
- Primrose Drive – drivers do not know where the school zone begins and ends
- Roborecki Crescent – too much school traffic connecting to Lenore Drive and Russell Road
- Russell Road – u-turns in school zone
- Russell Road & Girgulis Crescent – speed display board is obstructed by trees
- Silverwood Road
 - Between Whiteswan Drive and O'Brien Crescent especially in the winter
 - At curves
 - Sharp right turns
 - U-turns in school zone
- Wanuskewin Road
- Whiteswan Drive
 - Between Pinehouse Drive and Silverwood Road
 - By Ball Way
 - On weekend afternoons from May to September
 - Near 600 block of Whiteswan Drive at the park entrance
 - Downhill to the wastewater treatment plant
 - At curves
 - Drivers are distracted
- Verbeke Road between Verbeke Place and Gathercole Crescent
- General
 - Too many different speed limits
 - School zone signs are not visible
 - Loud motorbikes
 - Traffic noise

The following solutions were proposed by residents:

- Adilman Drive
 - Speed bumps
 - Signs
- Adilman Drive & Spencer Crescent / Rowles Road – contoured speed bump with a 30 kph sign

- Adilman Drive & Wanuskewin Road – speed bump with 20 kph signs
- Goerzen Street
 - Traffic calming measures
 - Crosswalk markings
 - Speed bumps
 - Do not paint dashed line due to high speeding drivers passing each other
- Lenore Drive – adequate 30 kph school zone signs in front of St. Anne’s Parish / Bishop James Mahoney High School in the eastbound direction
- Lenore Drive & Cree Crescent – no u-turn sign
- Molloy Street
 - Speed traps
 - Speed bumps
- Nordstrum Road – speed bumps
- Primrose Drive – 30 kph school zone signs for eastbound drivers turning off Primrose Drive
- Russell Road
 - Median jersey barrier to prevent u-turns
 - Solar-powered flashing lights to show when school zone is in effect
- Silverwood Road
 - Speed bumps (at crosswalks) between Whiteswan Drive and O’Brien Crescent
 - Crosswalk at pathways
 - More zebra crosswalks
 - Median jersey barrier to prevent u-turns
 - Solar-powered flashing lights to show when school zone is in effect
- Wanuskewin Road – more radar from Goerzen Street to Adilman Drive
- Whiteswan Drive
 - Crosswalk at pathways and by Ball Way
 - Speed bumps (at crosswalks) (at trail east of Ball Crescent and Perreault Crescent)
 - Great monitoring of speed
 - Obstacle in the centre of curve near Wastewater Treatment Plant
 - Crosswalk and speed bump at the park entrance
 - Yellow and white painted crosswalks
 - Keep children on the sidewalk and motorists on the street instead of speed bumps
 - More zebra crosswalks
- Verbeke Road
 - Speeds bumps
 - Reduced speed

- General
 - Reduce speed limits (40 kph) in residential areas
 - Mandatory roll-out signs in the middle of the road to ensure drivers are aware of school zones by Bishop James Mahoney High School
 - Implement playground zones rather than school zones
 - Do not put schools on busy feeder roads
 - Speed bumps
 - Road painted markings (i.e. zebra crosswalks) to designate limits of school zones
 - Extend school hours especially in the summer when there are children activities
 - More education to show that school zone hours are in effect during holidays
 - Vehicles do not yield at curb extensions
 - Parks should be enforced all the time
 - Variable message boards during snow storms
 - All schools should use the roll-out school zone signs placed on the medians
 - Photo radar on residential streets (Whiteswan Drive, Adilman Road, Russell Road, Goerzen Street)

2.2 Concern 2 – Pedestrian Safety

It is important to address pedestrian safety concerns to support active transportation. 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.”

Concerns regarding pedestrian safety were raised at the following locations:

- 51st Street / Lenore Drive & Wanuskewin Road – missing west sidewalk north of intersection
- Adilman Road – many senior pedestrians due to many care homes
- Adilman Drive & Spencer Crescent / Rowles Road – vehicles will not stop for pedestrians at the crosswalk
- Goerzen Street – no crosswalks
- Lenore Drive – jaywalking

- Lenore Drive & La Loche Road
 - Pedestrians wait to cross as some drivers do not slow down
 - U-turns
- Meilickie Road
 - Pedestrians wait to cross as some drivers do not slow down
 - Drivers do not slow down at speed bumps as they might be too smooth
 - Drivers do not notice pedestrians (at dusk and after dark)
- Molloy Street & Broadbent Avenue – motorists ignore crosswalk and do not stop or slow down
- Redberry Road & Lenore Drive – vehicles turn right even when the Pedestrian Actuated Signal is activated
- Russell Road
 - Jaywalking in school zone
 - Vehicles passing on the right at 120 Russell Road
- Russell Road & Girgulis Crescent – vehicles passing on the right
- Silverwood Road
 - Jaywalking in school zone
 - Many senior pedestrians as there are many care homes
- Whiteswan Drive – many children walking along this street
- Wanuskewin Road & Independent Grocery Store access – missing sidewalk
- Verbeke Road at multi-use pathway
- General
 - Safety of children in the neighbourhood
 - Speeding vehicles splash pedestrians

The following solutions were proposed by residents:

- Adilman Drive & Spencer Crescent / Rowles Road – a contoured speed bump with a 30 kph sign
- Goerzen Street – crosswalks
- Lenore Drive
 - Increase enforcement
 - Increase education
- Meilicke Road – improve slope of raised crosswalk
- Molloy Street & Broadbent Avenue
 - Visible signage
 - Walk light

- Redberry Road & Lenore Drive – prohibit vehicles from turning right when the Pedestrian Actuated Signal is activated
- Russell Road – median jersey barrier to prevent jaywalking
- Silverwood Road – median jersey barrier to prevent jaywalking
- Wanuskewin Road & Independent Grocery Store access – sidewalk
- Whiteswan Drive
 - Crosswalks at walkways between A.E. Adams Crescent and the Meewasin Park Trail
 - Trail/sidewalk close to the fence away from traffic
 - Active Pedestrian Corridors
 - Walkway on the west side of Whiteswan Drive far from the traffic lane
- General – all school zone signs should be placed on the median and sidewalk as they are highly visible

2.3 Concern 3 – Traffic Control

Traffic control signs are used 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.

Concerns regarding traffic controls were raised at the following locations:

- Adilman Drive
 - Drivers do not slow down at yield signs
 - Concerned about lane designation for westbound turns
- Adilman Drive & Silverwood Road / Zeman Crescent – vehicles does not obey the stop sign
- Adilman Drive & Wanuskewin Road – many vehicles run the red light
- Lenore Drive & Cree Crescent – vehicles impeding traffic as they are lined up to do u-turns to avoid red light camera or congestion on Warman Road
- Lenore Drive & Russell Road – left-turning vehicles on Nordstrum Road impede traffic flow
- Meilicke Road & Russell Road – motorists are not stopping fully at this three-way stop
- Molloy Street & Bain Crescent – blind spot
- Molloy Street & Silverwood Road – people disobey the traffic control

- Nordstrum Road & Russell Road
 - Poor sightlines for southbound traffic
 - Safety concerns for eastbound traffic
- Redberry Road & Lenore Drive – drivers pass on the right on a red light
- Silverwood Road – drivers do not slow down at yield signs
- Wanuskewin Road & Independent Grocery Store access – congested

The following solutions were proposed by residents:

- Adilman Drive – stop signs on all side streets
- Adilman Drive & Wanuskewin Road
 - More frequent enforcement
 - Improve traffic signal timing
 - Advance warning flashing signal for Wanuskewin Road to indicate that the light will turn amber
- Lenore Drive & Cree Crescent
 - Prohibit eastbound u-turns to improve traffic flow
 - Left turn lane
 - Increase fines
- Lenore Drive & Russell Road – parking restrictions on the east side of Russell Road (apartment driveway to Lenore Drive) to designate right northbound lane a through or passing lane to pass left-turning vehicles onto Nordstrum Road
- Meilicke Road & Russell Road – keep as an all-way stop
- Russell Road & Adilman Drive – three-way stop
- Silverwood Road – all side streets should have stop signs
- Wanuskewin Road & Independent Grocery Store access – traffic lights (by the north entrance)
- Whiteswan Drive & Lenore Drive
 - Do not install three-way stop (might decrease speed but will lead to traffic noise)
 - Three-way stop
- General – educate drivers about the difference between added lanes and merge lanes

2.4 Concern 4 – 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 concerns regarding maintenance were identified:

- Damaged signs and median islands
- Street signs obstructed by trees on through streets, including Adilman Drive
- Lack of snow removal. Streets are very slippery
- Deep ridges of snow along sidewalks for weeks
- Spring thaw leave streets slushy and rutted
- Drainage at Lenore Drive & La Loche Crescent
- Driveways on Meilicke Road are damaged
- Graters take out low medians

The following solutions were proposed by residents:

- Check street signs that are obstructed by trees

2.5 Concern 5 – Major Intersections & Corridors

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

Concerns regarding major intersections were identified at the following locations:

- 51st Street / Lenore Drive & Warman Road / Wanuskewin Road
 - Inconsistent high mounted and low mounted turning arrows
 - Only a few vehicles are able to make it through the intersection
 - Sightlines for left turns at this intersection (east to west) is very poor
- Adilman Drive & Wanuskewin Road – southbound and northbound vehicles running the red light
- Lenore Drive & Russell Road – left-turning vehicles onto Nordstrum Road impede the flow of traffic
- Wanuskewin Road – large tractor trailer usage
- Wanuskewin Road & Georzen Street – inconsistent high mounted and low mounted turning arrows

- General
 - Difficult to commute to work when main arteries are blocked off for events
 - Schools on busy roads cause high traffic volumes, possibilities of collisions, and slows traffic movement during rush hours

The following solutions were proposed by residents:

- 51st Street / Lenore Drive & Warman Road / Wanuskewin Road
 - Signs indicating that right lane is a right turn only lane
 - Modify signals
 - Improve sightlines
 - Pedestrian countdown timers
 - Increase length of the amber signal
 - No short left turn lights with drivers peeking around cars driving straight through for westbound and eastbound traffic
 - Amber lights with countdown timers
 - Improve visibility by removing median and lining up left turns (slotted left turns)
- Adilman Drive & Wanuskewin Road
 - More frequent enforcement
 - Modify traffic signal timing
 - Advance signal for vehicles on Wanuskewin Road
- Lenore Drive & Russell Road
 - Block right lane so cars turning off Russell Road onto Lenore Drive have a free lane
 - Dedicated right turn lane from Russell Road onto Lenore Drive
 - Restrict parking on east side of Russell Road (Lenore Drive to apartment driveway) and install northbound right turn through or passing lane to go around left-turning vehicles on Nordstrum Road
 - Lane designation signs for shared left/through lane or shared right/through lane for northbound through and eastbound right onto Lenore Drive
- Wanuskewin Road – flashing green light to indicate it will turn amber
- General
 - Need better placement of street name plates on traffic lights
 - Do not place schools on busy roads when planning new areas

3 STAGE 2: DEVELOPMENT OF DRAFT TRAFFIC PLAN

3.1 Methodology

Stage 2 of the neighbourhood traffic review included the development of a draft Traffic 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) 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

Characteristic	Classifications							
	Back Lanes		Locals		Collectors		Arterials	
	Residential	Commercial	Residential	Commercial	Residential	Commercial	Minor	Major
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		Traffic movement major consideration	Traffic movement primary consideration
Average Daily Traffic (vehicles per day)	<500	<1,000	<1,000	<5,000	<5,000	8,000-10,000	5,000 - 25,000 (~12,000)	
Typical Speed Limits (kph)	20		50		50		60	60-70
Transit Service	Not permitted		Generally avoided		Permitted		Permitted	
Cyclist	No restrictions or special facilities		No restrictions or special facilities		No restrictions or special facilities		Lane widening or special facilities may be provided	
Pedestrians	Permitted, no special facilities		Sidewalks on one or both sides	Sidewalks provided where required	Typically sidewalks provided both sides	Sidewalks provided where required	Sidewalks may be provided, separation for traffic lanes preferred	
Parking	Some restrictions		No restrictions or restriction on one side only		Few restrictions other than peak hour		Permitted, restricted or prohibited	Prohibited or peak hour restrictions

Vehicle speeds were measured to determine the 85th percentile speed, which is the speed at which 85 percent of vehicles are travelling at or below. The speed limit in the Silverwood Heights neighbourhood is 50 kph, except for school zones where the speed limit is 30 kph from September to June, Monday to Friday, 8:00 am to 5:00 pm.

The speed studies and Average Daily Traffic (ADT) on streets where residents identified speeding as a concern are summarized in **Table 3-2**.

Table 3-2: Speed Studies and Average Daily Traffic Counts (2017)

Street	Between	Class	Average Daily Traffic (vehicles per day)	Speed (kph)
Allegretto Way	Nordstrum Road to Allegretto Crescent	Local	100	38
Molloy Street	Bain Crescent (East) to Bain Crescent (West) / Kindrachuk Crescent		900	60
Molloy Street	Silverwood Road to Broadbent Avenue		950	50
Nordstrum Road	Sebestyen Crescent (South) to Allegretto Crescent		650	49
Nordstrum Road	Thain Crescent (West) to Thain Way		1,300	54
Roborecki Crescent	Roborecki Terrace to Lenore Drive		550	45
Verbeke Road	Verbeke Place to Gathercole Crescent		800	47
Meilicke Road	David Knight Crescent (West) to David Knight Crescent (East)	Minor Collector	3,250	51
Silverwood Road	Meilicke Road to J.J. Thiessen Crescent		2,100	53
Silverwood Road	O'Brien Crescent (South) / A.E. Adams Crescent (North) to A.E. Adams Crescent (South)		2,150	58
Adilman Drive	Neusch Crescent / Egnatoff Crescent (West) to Neusch Crescent / Egnatoff Crescent (East)	Major Collector	3,850	58
Adilman Drive	Zeman Crescent (West) to Zeman Crescent (East) / Silverwood Road		2,800	51
Georzen Street	Rao Crescent (West) to Rao Crescent (East)		2,700	60
Russell Road	Georzen Street to Girgulis Crescent		5,900	School - 33 Regular - 52
Silverwood Road	Ball Crescent (North) to Ball Crescent (South)		3,400	School - 38 Regular - 53
Whiteswan Drive	A.E. Adams Crescent Walkway (West) to A.E. Adams Crescent Walkway (East)		2,850	67
Lenore Drive	Cypress Court to Redberry Road	Minor Arterial	7,450	School - 53 Regular - 58
Lenore Drive	Roborecki Crescent to Russell Road		8,550	School - 34 Regular - 34
Lenore Drive	Wanuskewin Road / Warman Road to Cree Crescent	Major Arterial	18,200	69

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. At least 35% of the traffic entering the intersection from the minor street 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 6,000 vpd)	Criteria 3: Collisions within most recent 12 months (5 or more)	Result
Russell Road & Adilman Drive	462 vehicles (no)	5,440vpd (no)	0 (no)	Continue to Step 2
Silverwood Road & Molloy Street / Perreault Crescent	384 vehicles (no)	4,470vpd (no)	0 (no)	
Whiteswan Drive & Lenore Drive	463 vehicles (no)	4,940vpd (no)	0 (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
Russell Road & Adilman Drive	10% (no)	>200 metres (yes)	All-Way Stop Not Warranted
Silverwood Road & Molloy Street / Perreault Crescent	20% (no)	>200 metres (yes)	
Whiteswan Drive & Lenore Drive	30% (yes)	>200 metres (yes)	

Details of the all-way stop assessments are provided in **Appendix C**.

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 three peak periods of: 8:00 am to 9:00 am, 11:30 am to 1:30 pm, and 3:00 pm to 5:00 pm.

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 is provided in **Table 3-5**.

Table 3-5: Pedestrian Assessments

Location	Number of Pedestrians Crossing During Peak Hours	Result
Whiteswan Drive & A.E. Adams Crescent Walkway (North)	6	Pedestrian Devices not warranted
Whiteswan Drive & A.E. Adams Crescent Walkway (South)	3	
Whiteswan Drive & Ball Crescent Walkway	4	
Whiteswan Drive & Broadbent Avenue	54	

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

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 five peak hours of: 8:00 am to 9:00 am, 11:30 am to 1:30 pm, and 4:00 pm to 6:00 pm.

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 assessment is provided in **Table 3-6**.

Table 3-6: Traffic Signal Assessment

Location	Traffic Signal Warrant Points	Results
Wanuskewin Road & Independent Grocer Access	83	Traffic Signal Not Warranted

Details of the traffic signal assessment are provided in **Appendix E**.

3.6 Collision Analysis

The most recently available five-year collision data (2012 to 2016) was provided by Saskatchewan Government Insurance (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:

- Lenore Drive & Primrose Drive / Russell Road
- Wanuskewin Road (Goerzen Street to Lenore Drive)
- Adilman Drive & Wanuskewin Drive
- Georzen Street & Wanuskewin Drive
- Lenore Drive & Redberry Road
- Lenore Drive (Cree Crescent to Warman Road)
- Cree Crescent & Lenore Drive
- Meilicke Road & Russell Road
- Russell Road (Girgulis Road to Meilicke Road)
- Lenore Drive & Silverwood Road

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

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 Plan, including the location, recommendation and the justification 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 listed in **Table 4-1**.

Table 4-1: Recommended Improvements – Speeding and Shortcutting

Location	Recommendation	Justification
West of Adilman Drive & Davies Road / Spencer Crescent (West)	Relocate 50 kph speed limit sign for eastbound traffic	Improve visibility of speed limit sign to reduce speed
Adilman Drive & Neusch Crescent (West) / Egnatoff Crescent (West)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed
Goerzen Street & Nordstrum Road	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	
Russell Road & Girgulis Crescent (North)	Install curb extension on east side of north crosswalk; Provide speed data to Saskatoon Police Service for enforcement	
Molloy Street & Bain Crescent (West) / Kindachuk Crescent (West)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	

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

Location	Recommendation	Justification
Silverwood Road from Ball Crescent (North) to Ball Crescent (South)	Install School Ahead warning sign for southbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed
Silverwood Road & Whiteswan Drive	Install median island on north leg; Install curb extension on west side of north crosswalk; Install curb extension on east side of south crosswalk; Provide speed data to Saskatoon Police Service for enforcement	
Silverwood Road & O'Brien Crescent (East) / A.E. Adams Crescent (West)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	
Whiteswan Drive & A.E. Adams Crescent Walkway (West)	Install median island	
Whiteswan Drive from A.E. Adams Crescent Walkway (West) to A.E. Adams Crescent Walkway (East)	Install speed display board for eastbound traffic; Provide speed data to Saskatoon Police Service for enforcement	
Whiteswan Drive & Wastewater Treatment Plant Access	Install curb extensions and median island on east leg	
Lenore Drive (Wanuskewin Road to Russell Road)	Provide speed data to Saskatoon Police Service for enforcement	
Lenore Drive from Cypress Court to Redberry Road (East)	Install speed display board for westbound traffic; Provide speed data to Saskatoon Police Service for enforcement	

4.3 Pedestrian Safety

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

Table 4-2: Recommended Improvements – Pedestrian Safety

Location	Recommendation	Justification
Russell Road & Girgulis Crescent (North)	Install curb extension on east side of north crosswalk; Upgrade standard crosswalk to zebra crosswalk on the north leg	Improve pedestrian safety
Russell Road & Goerzen Street	Upgrade standard crosswalk to zebra crosswalk on the south leg	
Russell Road & Davies Road	Upgrade standard crosswalk to zebra crosswalk on the north leg	
Silverwood Road & Whiteswan Drive	Install median island on north leg; Install curb extension on west side of north crosswalk; Install curb extension on east side of south crosswalk	Improve pedestrian safety
Lenore Drive & La Loche Road	Upgrade standard crosswalk to zebra crosswalk on the east leg; Install U-Turn prohibited sign for westbound traffic	
Lenore Drive & Cypress Court	Upgrade standard crosswalk to zebra crosswalk on the east leg	
Lenore Drive & Redberry Road (East)	Upgrade standard crosswalk to zebra crosswalk on west leg; Install U-Turn prohibited sign for eastbound traffic	Improve pedestrian safety
West side of Wanuskewin Road adjacent to Independent Grocer	Install sidewalk	Improve pedestrian safety

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	Recommendation	Justification
Verbeke Road & Verbeke Court / Verbeke Crescent (West)	Install yield signs assigning right-of-way to Verbeke Road	Improve safety
Verbeke Road & Verbeke Place	Install yield sign assigning right-of-way to Verbeke Road	
Verbeke Road & Gathercole Crescent (West)	Install yield sign assigning right-of-way to Verbeke Road	
Verbeke Road & Verbeke Crescent (East) / Gathercole Crescent (East)	Install yield signs assigning right-of-way to Verbeke Road	
Silverwood Road & Molloy Street / Perreault Crescent (South)	Paint stop lines for eastbound and westbound traffic	Improve driver compliance
Lenore Drive & Russell Road / Primrose Drive	Install U-Turn prohibited sign for eastbound traffic	Improve safety

4.5 Follow Up Consultation – Presentation of Traffic Plan

The recommended improvements were presented to residents and stakeholders at a follow-up public meeting on November 23, 2017. Meeting minutes are provided in **Appendix G**. 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 H**. Additional issues raised after the presentation of the draft Traffic Plan were considered and outlined in **Appendix I**. 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 for the recommendations 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 5 years plus.

The placement of signs and pavement markings, and 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 Silverwood Heights are likely to take place in spring/summer 2018.

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

- **Table 5-1:** Signs, Pavement Markings & Temporary Traffic Calming Cost Estimate
- **Table 5-2:** Speed Display Board Cost Estimate
- **Table 5-3:** Permanent Traffic Calming Cost Estimate
- **Table 5-4:** Additional Traffic Counts Cost Estimate
- **Table 5-5:** Sidewalks Cost Estimate
- **Table 5-6:** Total Cost Estimate
- **Table 5-7:** Silverwood Heights Neighbourhood Recommended Improvements

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

Location	Device (# of Devices)	Cost Estimate	Time Frame
West of Adilman Drive & Davies Road / Spencer Crescent (West)	50 kph speed limit sign (1)	\$250	1 to 2 years
Adilman Drive & Neusch Crescent (West) / Egnatoff Crescent (West)	Median island (1)	\$500	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
Goerzen Street & Nordstrum Road	Median island (1)	\$500	
Russell Road & Girgulis Crescent (North)	Curb extension (1)	\$500	
	Zebra crosswalk (1)	\$500	1 to 2 years
Russell Road & Goerzen Street	Zebra crosswalk (1)	\$500	
Russell Road & Davies Road	Zebra crosswalk (1)	\$500	
Verbeke Road & Verbeke Court / Verbeke Crescent (West)	Yield sign (2)	\$500	
Verbeke Road & Verbeke Place	Yield sign (1)	\$250	
Verbeke Road & Gathercole Crescent (West)	Yield sign (1)	\$250	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
Verbeke Road & Verbeke Crescent (East) / Gathercole Crescent (East)	Yield signs (2)	\$500	
Molloy Street & Bain Crescent (West) / Kindrachuk Crescent (West)	Median island (1)	\$500	
Silverwood Road & Molloy Street / Perreault Crescent (South)	Stop line (2)	\$100	1 to 2 years
Silverwood Road from Ball Crescent (North) to Ball Crescent (South)	School Ahead warning sign (1)	\$250	
Silverwood Road & Whiteswan Drive	Median island (1)	\$500	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
	Curb extension (2)	\$1,000	
Silverwood Road & O'Brien Crescent (East) / A.E. Adams Crescent (West)	Median island (1)	\$500	

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

Location	Device (# of Devices)	Cost Estimate	Time Frame
Whiteswan Drive & A.E. Adams Crescent Walkway (West)	Median island (1)	\$500	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
Whiteswan Drive & Wastewater Treatment Plant Access	Curb extension (2)	\$1,000	
	Median island (1)	\$500	
Lenore Drive & Russell Road / Primrose Drive	U-Turn prohibited sign	\$250	1 to 2 years
Lenore Drive & La Loche Road	Zebra crosswalk (1)	\$500	
	U-Turn prohibited sign	\$250	
Lenore Drive & Cypress Court	Zebra crosswalk (1)	\$500	
Lenore Drive & Redberry Road (East)	Zebra crosswalk (1)	\$500	
	U-Turn Prohibited sign	\$250	
Total		\$11,850	

Table 5-2: Speed Display Board Cost Estimate

Location	Device (# of Devices)	Cost Estimate	Time Frame
Whiteswan Drive from A.E. Adams Crescent Walkway (West) to A.E. Adams Crescent Walkway (East)	Speed display board (1)	\$0 (funded through Speed Program)	1 to 2 years
Lenore Drive from Cypress Court to Redberry Road (East)	Speed display board (1)		
Total		\$0	

Table 5-3: Permanent Traffic Calming Cost Estimate

Location	Device (# of Devices)	Cost Estimate	Time Frame
Adilman Drive & Neusch Crescent (West) / Egnatoff Crescent (West)	Median island (1)	\$5,000	3 to 5 years
Goerzen Street & Nordstrum Road	Median island (1)	\$5,000	
Russell Road & Girgulis Crescent (North)	Curb extension (1)	\$45,000	3 to 5 years
Molloy Street & Bain Crescent (West) / Kindachuk Crescent (West)	Median island (1)	\$5,000	
Silverwood Road & Whiteswan Drive	Median island (1)	\$5,000	
	Curb extension (2)	\$90,000	
Silverwood Road & O'Brien Crescent (East) / A.E. Adams Crescent (West)	Median island (1)	\$5,000	
Whiteswan Drive & A.E. Adams Crescent Walkway (West)	Median island (1)	\$5,000	
Whiteswan Drive & Wastewater Treatment Plant Access	Curb extension (2)	\$90,000	
	Median island (1)	\$5,000	
Total		\$260,000	

Table 5-4: Additional Traffic Counts Cost Estimate

Location	Device	Cost Estimate	Time Frame
Adilman Drive & Neusch Crescent (West) / Egnatoff Crescent (West)	Peak Hour Turning Movement Count	\$200	1 to 2 years
Marcotte Crescent (Marcotte Way to Marcotte Road)	Traffic Volume Assessment	\$0	
Nordstrum Road (Allegretto Way to Nordstrum Court)	Speed Assessment	\$0	
Allegretto Crescent (Allegretto Way to Nordstrum Road)	Speed Assessment	\$0	
Total		\$200	

Table 5-5: Sidewalks Cost Estimate

Location	Device	Cost Estimate	Time Frame
West side of Wanuskewin Road adjacent to Independent Grocer	Sidewalk	TBD (Funded through Active Transportation Program)	5 years plus
Total		TBD	

Table 5-6: Total Cost Estimate

Category	Time Frame		
	Short-Term (1 to 2 years)	Medium-Term (3 to 5 years)	Long-Term (5 years plus)
Signs, Pavement Markings & Temporary Traffic Calming	\$11,850	-	-
Speed Display Board	\$0	-	-
Permanent Traffic Calming	-	\$260,000	-
Additional Traffic Counts	\$200	-	-
Sidewalks	-	-	TBD
Total	\$12,050	\$260,000	TBD

The total cost estimate for short-term improvements (signs, pavement markings, temporary traffic calming and speed display boards) is **\$12,050**. The total cost estimate for medium-term improvements (permanent traffic calming) is **\$260,000**. Long-term improvements (sidewalks) will be funded through the Active Transportation Program.

The list of recommended improvements resulting from the neighbourhood traffic review, including the location and reason, is summarized in **Table 5-7**.

The recommended Silverwood Heights Neighbourhood Traffic Plan is illustrated in **Exhibit 5-1**.

Table 5-7: Silverwood Heights Neighbourhood Recommended Improvements

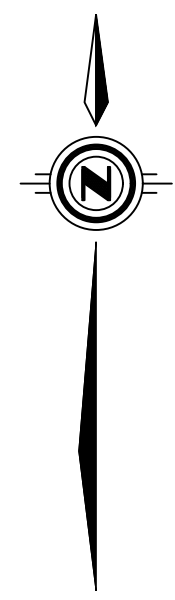
Item	Location	Recommendation	Justification	Implementation Schedule
1	West of Adilman Drive & Davies Road / Spencer Crescent (West)	Relocate 50 kph speed limit sign for eastbound traffic	Improve visibility of speed limit sign to encourage compliance	1 to 2 years
2	Adilman Drive & Neusch Crescent (West) / Egnatoff Crescent (West)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
		Traffic count in spring 2018	Determine if improvements are needed	1 to 2 years
3	Marcotte Crescent (Marcotte Way to Marcotte Road)	Traffic count in spring 2018	Determine if improvements are needed	
4	Goerzen Street & Nordstrum Road	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
5	Russell Road & Girgulis Crescent (North)	Install curb extension on east side of north crosswalk; Upgrade standard crosswalk to zebra crosswalk on the north leg; Provide speed data to Saskatoon Police Service for enforcement	Improve pedestrian safety & reduce speed	
6	Russell Road & Goerzen Street	Upgrade standard crosswalk to zebra crosswalk on the south leg	Improve pedestrian safety	1 to 2 years
7	Russell Road & Davies Road	Upgrade standard crosswalk to zebra crosswalk on the north leg	Improve pedestrian safety	
8	Verbeke Road & Verbeke Court / Verbeke Crescent (West)	Install yield signs assigning right-of-way to Verbeke Road	Improve safety	
9	Verbeke Road & Verbeke Place	Install yield sign assigning right-of-way to Verbeke Road	Improve safety	
10	Verbeke Road & Gathercole Crescent (West)	Install yield sign assigning right-of-way to Verbeke Road	Improve safety	
11	Verbeke Road & Verbeke Crescent (East) / Gathercole Crescent (East)	Install yield signs assigning right-of-way to Verbeke Road	Improve safety	
12	Molloy Street & Bain Crescent (West) / Kindrachuk Crescent (West)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)

Table 5-7 Continued: Silverwood Heights Neighbourhood Recommended Improvements

Item	Location	Recommendation	Justification	Implementation Schedule
13	Silverwood Road & Molloy Street / Perreault Crescent (South)	Paint stop lines for eastbound and westbound traffic	Improve driver compliance	1 to 2 years
14	Silverwood Road from Ball Crescent (North) to Ball Crescent (South)	Install School Ahead warning sign for southbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	
15	Silverwood Road & Whiteswan Drive	Install median island on north leg; Install curb extension on west side of north crosswalk; Install curb extension on east side of south crosswalk; Provide speed data to Saskatoon Police Service for enforcement	Improve pedestrian safety & reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
16	Silverwood Road & O'Brien Crescent (East) / A.E. Adams Crescent (West)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	
17	Whiteswan Drive & A.E. Adams Crescent Walkway (West)	Install median island	Reduce speed	
18	Whiteswan Drive from A.E. Adams Crescent Walkway (West) to A.E. Adams Crescent Walkway (East)	Install speed display board for eastbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 2 years
19	Whiteswan Drive & Wastewater Treatment Plant Access	Install curb extensions and median island on east leg	Reduce speed	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
20	Nordstrum Road (Allegretto Way to Nordstrum Court)	Speed assessment in spring 2018	Determine if improvements are needed	1 to 2 years
21	Allegretto Crescent (Allegretto Way to Nordstrum Road)	Speed assessment in spring 2018	Determine if improvements are needed	
22	Lenore Drive (Wanuskewin Road to Russell Road)	Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	
23	Lenore Drive & Russell Road / Primrose Drive	Install U-turn prohibited sign for eastbound traffic	Improve traffic safety	
24	Lenore Drive & La Loche Road	Upgrade standard crosswalk to zebra crosswalk on the east leg; Install U-turn prohibited sign for westbound traffic	Improve pedestrian safety	

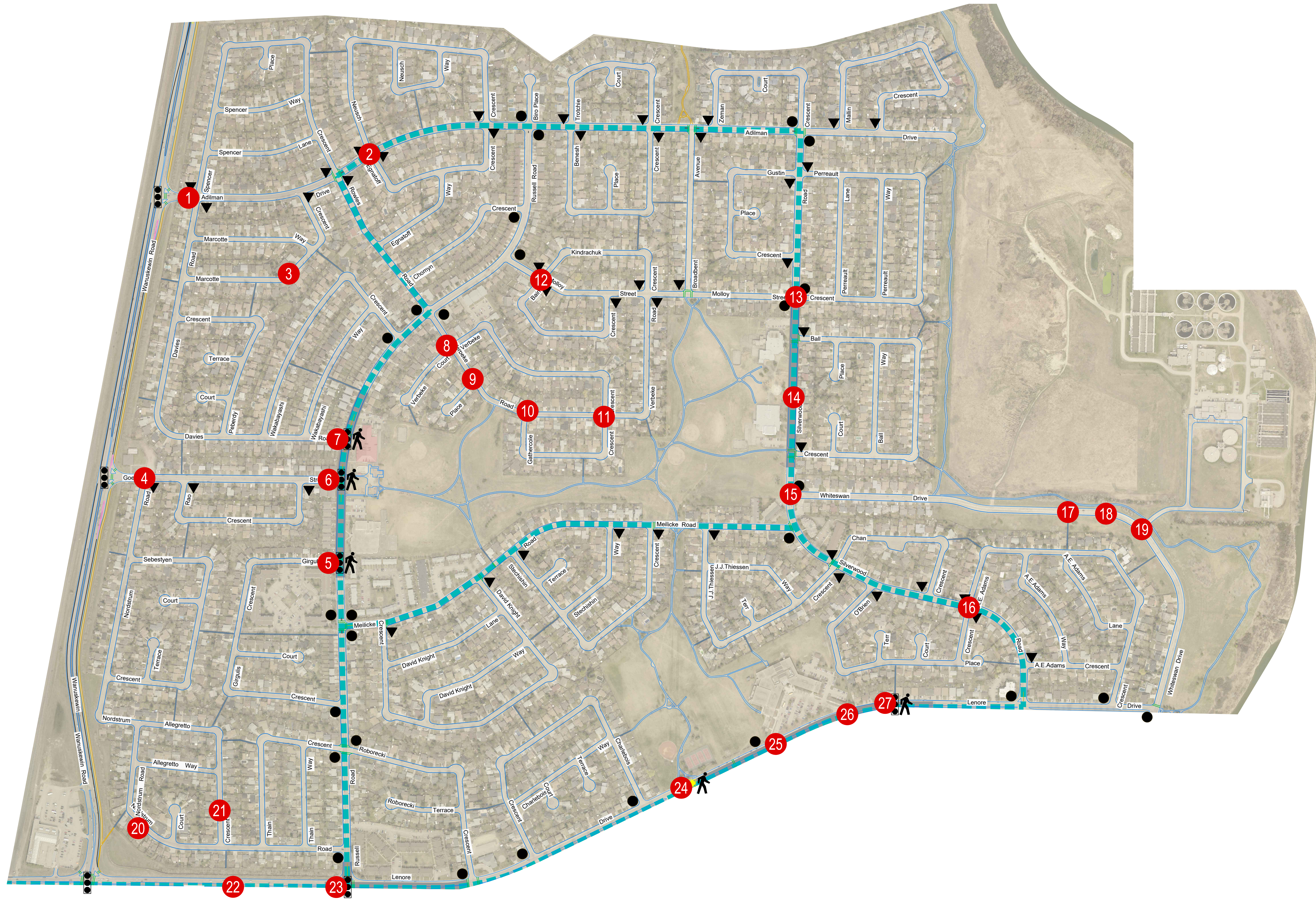
Table 5-7 Continued: Silverwood Heights Neighbourhood Recommended Improvements

Item	Location	Recommendation	Justification	Implementation Schedule
25	Lenore Drive & Cypress Court	Upgrade standard crosswalk to zebra crosswalk on the east leg	Improve pedestrian safety	
26	Lenore Drive from Cypress Court to Redberry Road (East)	Install speed display board for westbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce speed	1 to 2 years
27	Lenore Drive & Redberry Road (East)	Upgrade standard crosswalk to zebra crosswalk on west leg; Install U-turn prohibited sign for eastbound traffic	Improve pedestrian safety	
28	West side of Wanuskewin Road adjacent to Independent Grocer	Install sidewalk	Improve pedestrian safety	5 years plus



LEGEND

- EXISTING STOP SIGN
- ▼ EXISTING YIELD SIGN
- BUS ROUTE
- SCHOOL ZONE
- 🚦 EXISTING TRAFFIC SIGNAL
- 🚶 EXISTING PEDESTRIAN ACTUATED SIGNAL LOCATION
- 🚶💡 ACTIVE PEDESTRIAN CORRIDOR SIGNAL LOCATION
- # RECOMMENDATIONS



SILVERWOOD HEIGHTS TRAFFIC PLAN

APPENDIX A: PUBLIC MEETING #1 – MAY 16, 2017 MINUTES

Silverwood Heights Neighbourhood Traffic Review
Tuesday, May 16, 2017, 7:00 PM – 9:00 PM
Marion Graham Collegiate (602 Lenore Drive)

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 – Silverwood Heights Neighbourhood Traffic Review

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

- Presentation Outline
 - Neighbourhood Traffic Review Process
 - Silverwood Heights Review Schedule
 - Sources of Information
 - Past Concerns Received
 - Description of Traffic Calming & Pedestrian Safety Devices
 - Corridor Reviews & Major Intersection Reviews
- Neighbourhood Traffic Review Process
 - August 2013 – New process
 - Mandate – Improve road safety for all road users within neighbourhoods, reduce traffic volumes, slow vehicular speeds, and improve pedestrian crossings & intersections where necessary
 - 2014 – Reviewed 11 neighbourhoods
 - 2015 – Reviewed 8 neighbourhoods
 - 2016 – Reviewed 8 neighbourhoods
 - 2017 – Silverwood Heights, Pleasant Hill, North Park / Richmond Heights, Dundonald, Buena Vista, Exhibition / Queen Elizabeth, Wildwood, Erindale / Arbor Creek
- Silverwood Heights Review Schedule
 - Stage 1 – Identify issues & possible solutions through community consultation (May to Fall 2017)
 - Stage 2 – Develop a draft traffic plan
 - Stage 3 – Present draft traffic plan to community for feedback (Fall 2017)
 - Stage 4 – Implement changes over time (Beginning Spring 2018)
- Sources of Information

- Past studies
- Collision analysis
- Feedback from public consultation
- Traffic counts & assessments
- Past Concerns Received
 - Speeding/shortcutting – Nordstrum Road, Adilman Road, Goerzen Street, Molloy Street, School Zones, Molloy Street, Silverwood Road, Wanuskewin Road, Whiteswan Drive
 - Pedestrian Safety – Georzen Street, Molloy Street & Broadbent Avenue, Whiteswan Drive
 - 51st Street East / Lenore Drive & Warman Road / Wanuskewin Road
 - Lenore Drive & Cree Crescent
 - Lenore Drive & Russell Road
 - Wanuskewin Road & Independent Grocery Store access
- 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
- 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 Silverwood Heights and potential solutions
- Group 1: Marina Melchiorre (City Facilitator)

- Goerzen Street
 - Vehicles turning off of Wanuskewin Road are speeding
- Nordstrum Road
 - Speeds too high along curve in the winter, install speed bumps
 - 30 kph sign in the alley on Allegretto Way and Court is not working
- Nordstrum Road & Russell Road
 - Poor sightlines for southbound traffic
 - Concerns for eastbound traffic
- 51st Street & Warman Road
 - Want countdown timers
- Park on Verbeke Road
 - Speeding between Verbeke Place and Gathercole Crescent
 - Wants speed bumps or reduced speed
 - Concerns with crossing at the multi-use pathway
- Bain Crescent & Molloy Street
 - Speeding between Silverwood Road and Russell Road
 - High speed around corner of the intersection
 - Wants speed bumps
- Meilicke Road & Russell Road
 - Leave all-way stop as is
- Adilman Road
 - Concerned about lane designation for westbound turns
- Roborecki Crescent
 - Too much school traffic connecting to Lenore Drive and Russell Road
- Wanuskewin Road
 - Why are trucks now allowed on Wanuskewin Road north of Lenore Drive?
- General
 - Wants 40 kph speed limits in residential areas
- Group 2: Mariniel Flores (City Facilitator)
 - Whiteswan Drive & Silverwood Road
 - Lots of traffic
 - Speeding at curve, collect speed data at the bottom of the hill
 - Dangerous for children as vehicles are making sharp right turns
 - Speed bumps suggested
 - Need crosswalk at the pathway
 - Need speed bumps at all crosswalks
 - Need more zebra crosswalks
 - Russell Road & Adilman Drive
 - 3-way stop suggested
 - Meilicke Road
 - Drag strip
 - Driveways are damaged due to this street being a bus route
 - Collisions due to speeding

- Potential congestion as it is also an emergency route
 - Not wide enough to accommodate parking and buses
- School Zones
 - School zone hours should be extended from 7:30am to dusk, longer in the summer when there are children's activities
 - Install a median jersey barrier to prevent u-turns and jaywalking along Silverwood Road and Russell Road
 - Install solar-powered flashing lights to show when school zone hours are in effect
 - More education needed to show that school zone hours are in effect during holidays
- Adilman Drive
 - Speeding
- Lenore Drive & Whiteswan Drive
 - 3-way stop suggested
- Russell Road & Meilicke Road
 - Vehicles are not stopping fully at this 3-way stop
- Molloy Street & Bain Crescent
 - Blind spot
- Lenore Drive & Cree Crescent
 - Vehicles are making eastbound u-turns to avoid congestion at Wanuskewin Road & Lenore Drive so prohibit eastbound u-turns to improve traffic flow
 - Longer left-turn lane needed
 - Increase fines
- Active Pedestrian Corridor on Lenore Drive
 - Speeding and u-turns
- Bishop James Mahoney High School
 - Jaywalking
 - Increase enforcement and education
 - Many vehicles are crossing the single solid yellow line to turn
- Whiteswan Drive
 - Install a walkway on the south side of Whiteswan Drive far from the traffic lane
- Russell Road
 - Vehicles passing on the right at Girgulis Crescent, south of Adilman Drive and when vehicles are turning into their driveways, particularly at 120 Russell Road
- Russell Road & Girgulis Crescent
 - Speed display board is obstructed by trees
- Davies Road
 - Near misses due to shortcutting and speeding at the corner
- 51st Street & Warman Road
 - Vehicles can't see when they are completing left-turns
 - Collisions

- Improve visibility by removing median and lining up left-turns (slotted left-turns)
- Warman Road & Circle Drive
 - Poor lane designation signs
- General
 - Vehicles don't yield at curb extensions
 - There are many aggressive drivers
 - Parks should be enforcing all the time
 - Need playground zones
 - Many senior pedestrians as there are many care homes along Adilman Road and Silverwood Road
 - Graters take out low medians
 - Need variable message boards during snow storms
 - Need better placement of street name plates on traffic lights
 - Educate drivers about the difference between added lanes and merging

4. Next Steps

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

1. Continue monitoring traffic issues in your neighbourhood
2. Mail-in or email comments no later than June 16, 2017
3. Additional public input via City on-line Community Engagement webpage no later than June 16, 2017 at <http://shapingsaskatoon.ca/discussions/silverwood-heights-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

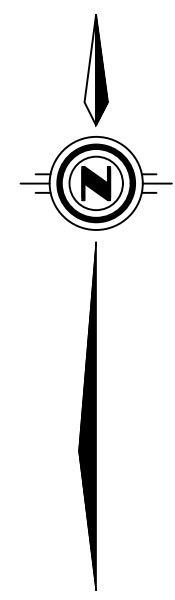
5. Large Group Discussion – Questions & Answers

- Councillor Donauer: How will residents be notified about the follow-up meeting?
 - Facilitator: Flyers will be mailed out and will also be sent to the Community Association. Those on a mailing list can be notified as well.

List of Representatives

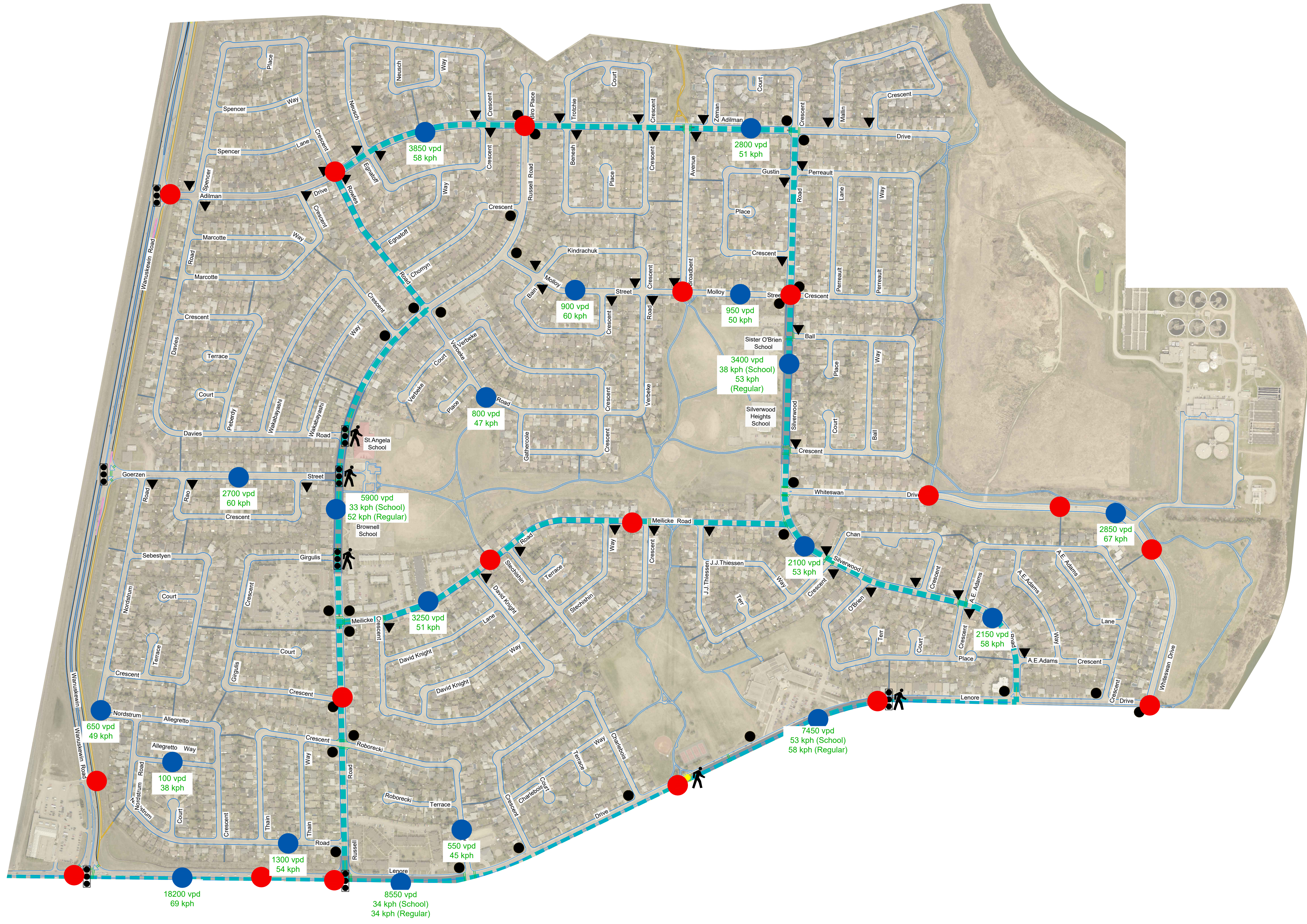
- Kathy Dahl, Mitch Riabko – Great Works Consulting, Facilitators
- Mariniel Flores, P.Eng. – City of Saskatoon, Transportation & Utilities, Transportation Engineer
- Marina Melchiorre, P.Eng. – City of Saskatoon, Transportation & Utilities, Senior Transportation Engineer
- Councillor Randy Donauer – City of Saskatoon

APPENDIX B: TRAFFIC DATA COLLECTION MAP



LEGEND

- EXISTING STOP SIGN
- ▼ EXISTING YIELD SIGN
- BUS ROUTE
- SCHOOL ZONE
- 🚦 EXISTING TRAFFIC SIGNAL
- 🚦 EXISTING PEDESTRIAN ACTUATED SIGNAL LOCATION
- 🚶 ACTIVE PEDESTRIAN CORRIDOR SIGNAL LOCATION
- TRAFFIC + PEDESTRIAN COUNT
- TRAFFIC VOLUME + SPEED STUDY
- 786 vpd — NUMBER OF VEHICLES PER DAY
- 47.2 kph — 85th PERCENTILE SPEED



SILVERWOOD HEIGHTS TRAFFIC DATA

APPENDIX C: ALL-WAY STOP ASSESSMENTS

All-Way Stop Assessment (Policy C07-007 – Traffic Control – Use of Stop & Yield Signs)

Step 1:

The following conditions must be met for all-way stop control to be considered:

- i) The combined volume of traffic entering the intersection over the five peak hour periods from the minor street must be at least 25% of the total volume for a three-way stop control, and at least 35% of the total volume for a four-way stop control.
- ii) There can be no all-way stop control and traffic signal within 200 metres of the proposed intersection being considered for all-way stop control on either of the intersecting streets.

Location	Condition 1: % of Traffic from Minor Street	Condition 2: Traffic Signals or All-Way Stop within 200m	All-Way Stop Warrant
Russell Rd & Adilman Dr	10% - Condition NOT met	Yes – Condition met	Conditions NOT met.
Silverwood Rd & Molloy St / Perreault Cres	20% - Condition NOT met	Yes – Condition met	
Whiteswan Dr & Lenore Dr	30% - Condition met	Yes – Condition met	Conditions met. Continue to Step 2.

Provided the above criteria are met, the following conditions, singly or in combination, may warrant the installation of all-way stop signs:

- i) 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.
- ii) When the total number of vehicles entering the intersection from all approaches averages at least 600 per hour for the peak hour or the total intersection entering volume exceeds 6,000 vehicles per day.
- iii) The average delay per vehicle to the minor street traffic must be 30 seconds or greater during the peak hour.
- iv) As an interim measure to control traffic while arrangements are being made for the installation of traffic signals.

Location	Criteria 1: 5 or more collisions in most recent 12 months	Criteria 2: Total number of vehicles entering the intersection from all approaches averages at least 600 per hour for the peak hour	Criteria 3: Total intersection entering volume exceeds 6,000 vehicles per day	Results
Whiteswan Dr & Lenore Dr	0 – Condition NOT met	463 – Condition NOT met	4,940 – Condition NOT met	Three-way stop NOT warranted.

APPENDIX D: PEDESTRIAN DEVICE ASSESSMENTS

Whiteswan Drive & A.E. Adams Crescent Walkway (North)

Pedestrian Actuated Signal Warrant

Prepared By: Mariniel Flores Date: Saturday, November 11, 2017

Location & Roadway Classification: Whiteswan Dr (Major Collector) & A.E. Adams Cres Walkway (North)
 Date of Count: Day of wk: Thursday Mth, Day, Yr: Thursday, September 14, 2017
 Weather: 10.4°C
 Traffic Control Devices: None
 Current Pedestrian Control: Standard crosswalk, temporary curb extensions
 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 170 m
 Location: Whiteswan Dr & Wastewater Treatment Plant
 Type: Stop sign, standard crosswalk on south leg
 Is the orientation of this crosswalk(s) N-S? y (y or n)
 Duration of pedestrian count 5 hrs

Elementary: 6 Total Warranted PC Points: _____ or _____ / period
 High School: _____ Highest PC point value: 364 at _____
 Adult: _____ Active Ped Corridor Points: _____
 Senior: _____ Pedestrian Actuated Signal Points: 13
 Vehicles passing through crosswalk(s): 800

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

****Install device at the West 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 / Imaired	Senior / Imaired	Adult	Teen	Child	
7:00													
7:15													
7:30													
7:45													
8:00		12		34									
8:15		10		31	1								
8:30		16		34	3								
8:45		10		25									
9:00													
9:15													
9:30													
9:45													
AM Totals		48		124	4								
11:30		14		14									
11:45		14		9	1								
12:00		14		17									
12:15		18		14									
12:30		8		8									
12:45		15		16									
13:00		11		11									
13:15		17		14									
Noon Totals		111		103	1								
14:00													
14:15													
14:30													
14:45													
15:00		16		15									
15:15		27		17									
15:30		25		25	1								
15:45		29		23									
16:00		29		19									
16:15		34		24									
16:30		33		28									
16:45		48		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													
PM Totals		241		173	1								
Totals		400		400	6								
					West Crosswalk =			6	East Crosswalk =				

Whiteswan Drive & A.E. Adams Crescent Walkway (South)

Pedestrian Actuated Signal Warrant

Prepared By: Mariniel Flores Date: Saturday, November 11, 2017

Location & Roadway Classification: Whiteswan Dr (Major Collector) & A.E. Adams Cres Walkway (South)
 Date of Count: Day of wk: Thursday Mth, Day, Yr: Thursday, September 14, 2017
 Weather: 10.4°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) 50 km/h
 85th percentile (check one)
 Posted Limit
 Distance to nearest protected crosswalk 55 m
 Location: Whiteswan Dr & Wastewater Treatment Plant
 Type: Stop sign, standard crosswalk on south leg
 Is the orientation of this crosswalk(s) N-S? n (y or n)
 Duration of pedestrian count 5 hrs

Elementary: **3** Total Warranted PC Points: _____ or _____ / period
 High School: _____ Highest PC point value: **118** at _____
 Adult: _____ Active Ped Corridor Points: _____
 Senior: _____ Pedestrian Actuated Signal Points: **13**
 Vehicles passing through crosswalk(s): **919**

**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 / Imaired	Senior / Imaired	Adult	Teen	Child	
7:00													
7:15													
7:30													
7:45													
8:00	33		12										
8:15	37		11										
8:30	36		15		1								
8:45	22		13										
9:00													
9:15													
9:30													
9:45													
AM Totals	128		51		1								
11:30	18		19										
11:45	14		16										
12:00	24		15										
12:15	11		21										
12:30	12		18										
12:45	18		18										
13:00	12		13										
13:15	17		17										
Noon Totals	126		137										
14:00													
14:15													
14:30													
14:45													
15:00	15		19		1								
15:15	26		31										
15:30	28		28										
15:45	26		36		1								
16:00	19		26										
16:15	26		39										
16:30	34		34										
16:45	41		49										
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													
PM Totals	215		262		2								
Totals	469		450		3								
					North Crosswalk = 3				South Crosswalk =				

Whiteswan Drive & Ball Crescent Walkway

Pedestrian Corridor Calculation

Time (15 minute intervals)	Vehicle Counts		Pedestrian Counts						P.C. Warrant Points	Periods Wrnt'd (1=Yes)	Points of Wrnt'd Periods
			Total Both Sides			Factored Counts					
	15 min.	30 min.	Child	Teen	Adult	Senior / Impaired	Total	15 min.	30 min.		
7:00											
7:15											
7:30											
7:45											
8:00	57	57									
8:15	43	100									
8:30	57	100									
8:45	43	100									
9:00		43									
9:15											
9:30											
9:45											
AM Totals	200										
11:30	22										
11:45	27	49									
12:00	24	51									
12:15	29	53									
12:30	29	58									
12:45	28	57									
13:00	26	54									
13:15	18	44									
Noon Totals	203										
14:00											
14:15											
14:30											
14:45											
15:00	29	29									
15:15	37	66									
15:30	42	79									
15:45	53	95									
16:00	37	90	1				1	1	1	90	
16:15	56	93	2				2	2	3	279	
16:30	67	123							2	246	
16:45	87	154	1				1	1	1	154	
17:00		87							1	87	
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											
PM Totals	408		4				4				
Totals	811		4				4				

100%		100%
West Crosswalk = 4		
East Crosswalk =		

<<< install crosswalk on this side of the int.

SUMMARY

Total Warranted PC Points: or / period
 Highest PC point value: 279 at
 Average PC point value: 57
 No. of periods warranted:

Whiteswan Drive & Ball Crescent Walkway

Pedestrian Actuated Signal Warrant

Prepared By: Mariniel Flores Date: Saturday, November 11, 2017

Location & Roadway Classification: Whiteswan Dr (Major Collector) & Ball Cres Walkway
 Date of Count: Day of wk: Tuesday Mth, Day, Yr: Tuesday, September 19, 2017
 Weather: 11.1°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) 50 km/h
 85th percentile (check one)
 Posted Limit
 Distance to nearest protected crosswalk 262 m
 Location: Whiteswan Dr & A.E. Adams Cres Walkway (North)
 Type: Standard crosswalk, temporary curb extensions
 Is the orientation of this crosswalk(s) N-S? y (y or n)
 Duration of pedestrian count 5 hrs

Elementary: 4 Total Warranted PC Points: _____ or _____ / period
 High School: _____ Highest PC point value: 279 at _____
 Adult: _____ Active Ped Corridor Points: _____
 Senior: _____ Pedestrian Actuated Signal Points: 18
 Vehicles passing through crosswalk(s): 811

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

****Install device at the West 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 / Imaired	Senior / Imaired	Adult	Teen	Child	
7:00													
7:15													
7:30													
7:45													
8:00		14		43									
8:15		13		30									
8:30		22		35									
8:45		10		33									
9:00													
9:15													
9:30													
9:45													
AM Totals		59		141									
11:30		9		13									
11:45		12		15									
12:00		11		13									
12:15		12		17									
12:30		14		15									
12:45		9		19									
13:00		14		12									
13:15		8		10									
Noon Totals		89		114									
14:00													
14:15													
14:30													
14:45													
15:00		20		9									
15:15		24		13									
15:30		24		18									
15:45		33		20									
16:00		24		13			1						
16:15		38		18			2						
16:30		33		34									
16:45		59		28			1						
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													
PM Totals		255		153	4								
Totals		403		408	4								
					West Crosswalk = 4				East Crosswalk =				

Molloy Street & Broadbent Avenue

Pedestrian Corridor Calculation

Time (15 minute intervals)	Vehicle Counts		Pedestrian Counts					P.C.		Points	Periods Wrnt'd (1=Yes)	Points of Wrnt'd Periods
			Total Both Sides					Factored Counts				
	15 min.	30 min.	Child	Teen	Adult	Senior / Impaired	Total	15 min.	30 min.			
7:00												
7:15												
7:30												
7:45												
8:00	30	30	1				1	1	1	30		
8:15	22	52	2				2	2	3	156		
8:30	36	58	7				7	7	9	522		
8:45	36	72	3				3	3	10	720		
9:00		36							3	108		
9:15												
9:30												
9:45												
AM Totals	124		13				13					
11:30	15											
11:45	20	35										
12:00	18	38										
12:15	18	36	1				1	1	1	36		
12:30	13	31							1	31		
12:45	15	28										
13:00	15	30										
13:15	8	23										
Noon Totals	122		1				1					
14:00												
14:15												
14:30												
14:45												
15:00	20	20										
15:15	23	43	7				7	7	7	301		
15:30	40	63	15				15	15	22	1,386		
15:45	21	61	6				6	6	21	1,281		
16:00	16	37	4				4	4	10	370		
16:15	24	40	5				5	5	9	360		
16:30	27	51	2				2	2	7	357		
16:45	34	61	1				1	1	3	183		
17:00		34							1	34		
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												
PM Totals	205		40				40					
Totals	451		54				54					
			100%				100%					
			West Crosswalk =				30	<<< install crosswalk on this side of the int.				
			East Crosswalk =				24					

SUMMARY

Total Warranted PC Points: _____ or _____ / period
 Highest PC point value: 1,386 at _____
 Average PC point value: 392
 No. of periods warranted: _____

Molloy Street & Broadbent Avenue

Pedestrian Actuated Signal Warrant

Prepared By: Mariniel Flores Date: Friday, November 17, 2017

Location & Roadway Classification: Molloy St (Local) & Broadbent Ave (Local)
 Date of wk: Thursday Mth, Day, Yr: Thursday, September 28, 2017
 Weather: 12.2°C
 Traffic Control Devices: Yield sign on Broadbent Ave assigning right of way to Molloy St
 Current Pedestrian Control: Standard crosswalk on all three legs
 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: Silverwood Rd & Molloy St / Perreault Cres
 Type: Standard crosswalk
 Is the orientation of this crosswalk(s) N-S? y (y or n)
 Duration of pedestrian count 5 hrs

Elementary: 54 Total Warranted PC Points: _____ or _____ / period
 High School: _____ Highest PC point value: 1,386 at _____
 Adult: _____ Active Ped Corridor Points: _____
 Senior: _____ Pedestrian Actuated Signal Points: 17
 Vehicles passing through crosswalk(s): 451

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

****Install device at the West 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 / Imaired	Senior / Imaired	Adult	Teen	Child	
7:00													
7:15													
7:30													
7:45													
8:00	2	10		18	1								
8:15	4	3		15	2								
8:30	5	9		22	5								2
8:45	2	19		15	3								
9:00													
9:15													
9:30													
9:45													
AM Totals	13	41		70	11								2
11:30	2	9		4									
11:45	2	12		6									
12:00	1	11		6									
12:15	2	5		11	1								
12:30	1	6		6									
12:45	2	8		5									
13:00	2	8		5									
13:15	2	3		3									
Noon Totals	14	62		46	1								
14:00													
14:15													
14:30													
14:45													
15:00	1	11		8									
15:15	4	10		9	3								4
15:30	3	24		13	10								5
15:45	2	10		9	1								5
16:00	1	8		7	1								3
16:15	2	13		9	1								4
16:30		20		7	1								1
16:45	3	16		15	1								
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													
PM Totals	16	112		77	18								22
Totals	43	215		193	30								24
West Crosswalk =								30	East Crosswalk =				24

APPENDIX E: TRAFFIC SIGNAL ASSESSMENTS

Wanuskewin Road & Independent Grocer Access

City of Saskatoon Canadian Matrix Traffic Signal Warrant Analysis

Main Street (name)	Wanuskewin Rd
Side Street (name)	Independent Grocery Store Access
Quadrant / Int #	
	CHECK SHEET

for Warrant Calculation Results, please hit 'Page Down'

Direction (EW or NS)	NS
Direction (EW or NS)	EW
Comments	MF

Road Authority:	City of Saskatoon
City:	Saskatoon
Analysis Date:	2017 Dec 14, Thu
Count Date:	2017 Oct 4, Wed
Date Entry Format:	(yyyy-mm-dd)

Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	Upstream Signal (m)	# of Thru Lanes
Wanuskewin Rd	NB	1		2				675	2
Wanuskewin Rd	SB			2				195	2
Independent Grocery Store Access	WB								
Independent Grocery Store Access	EB			1					

Are the Independent Grocery Store Access EB right turns significantly impeded by through movements? (y/n)

	n
	n

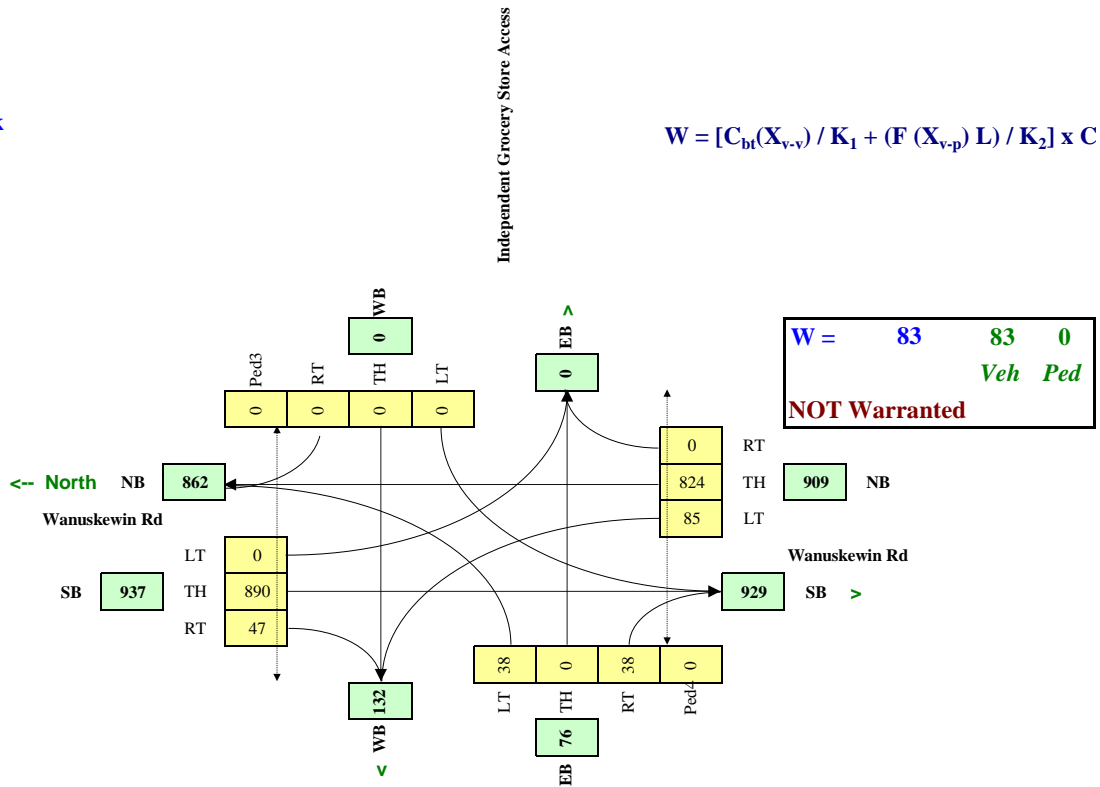
Demographics		
Elem. School/Mobility Challen	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	230,000
Central Business District	(y/n)	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Wanuskewin Rd	NS	60	2.0%	n	2.7
Independent Grocery Store Access	EW		2.0%	n	

Set Peak Hours	NB			SB			WB			EB			Ped1	Ped2	Ped3	Ped4	
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	NS	NS	EW	EW	
	W Side			E Side			N Side			S Side			W Side	E Side	N Side	S Side	
7:00 - 8:00	30	794			982	17				9		7	0		0	0	0
8:00 - 9:00	45	595			1070	25				11		18	0		0	0	0
11:30 - 12:30	121	692			756	78				56		43	0		0	0	0
12:30 - 13:30	101	736			687	47				45		40	0		0	0	0
16:00 - 17:00	121	1037			944	49				45		62	0		0	0	0
17:00 - 18:00	91	1091			903	66				60		59	0		0	0	0
Total (6-hour peak)	509	4,945	0	0	5,342	282	0	0	0	226	0	229	0	0	0	0	0
Average (6-hour peak)	85	824	0	0	890	47	0	0	0	38	0	38	0	0	0	0	0

Average 6-hour Peak Turning Movements

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



APPENDIX F: COLLISION ANALYSIS

Street 1	Street 2	UGRID	2012	2013	2014	2015	2016	Total Number of Collisions (2012 - 2016)	Total Number of Collisions (2016)	Right Angle, Left Turn & Right Turn Only (2012 - 2016)	Right Angle, Left Turn & Right Turn Only (2016)	Average Number of Collisions (2012 - 2016)
Lenore Dr	Primrose / Russell	SKK1-1	10	8	17	7	12	54	12	35	6	11
Wanuskewin Rd	Goerzen - Lenore	SKJ1-15	2	5	3	3	1	14	1	4	0	3
Adilman Dr	Wanuskewin Rd	SKJ0-7	3	3	3	4	0	13	0	4	0	3
Goerzen St	Wanuskewin Rd	SKJ0-11	3	2	3	2	1	11	1	5	0	2
Lenore Dr	Redberry Rd E	SKLI-5	3	2	4	2	0	11	0	0	0	2
Lenore Dr	Cree Cr - Warman	SKJ1-4	1	2	3	3	1	10	1	1	0	2
Cree Cr	Lenore Dr	SKJ1-8	1	2	3	2	2	10	2	8	2	2
Meilicke Rd	Russell Rd	SKK1-6	3	1	3	1	2	10	2	0	0	2
Russell Rd	Girgulis - Meilicke	SKK1-16	1	2	1	3	2	9	2	1	1	2
Lenore Dr	Silverwood Rd	SKLI-26	2	0	3	2	1	8	1	0	0	2
Wanuskewin Rd	Entrance To Extra Foods N Of 51	SKJ1-40	1	2	1	3	0	7	0	5	0	1
Russell Rd	300 Davies - Wakabayashi	SKK0-21	1	1	1	1	3	7	3	0	0	1
Girgulis Cr	300 Girgulis Cr - N Girgulis	SKJ1-21	0	0	1	2	3	6	3	0	0	1
Adilman Dr	Rowles Rd / Spencer E	SKK0-4	0	1	2	2	1	6	1	5	1	1
Lenore Dr	Redberry R W / Roborecki Cr	SKK1-2	1	1	1	0	3	6	3	5	3	1
Lenore Dr	Cree - Primrose Dr	SKK1-68	1	2	1	2	0	6	0	0	0	1
Silverwood Rd	Ball - Ball	SKL0-15	0	3	1	2	0	6	0	0	0	1
Wanuskewin Rd	60th - Adilman	SKJ0-19	0	0	1	1	3	5	3	0	0	1
Russell Rd	400 Molloy - Rowles	SKK0-15	1	1	3	0	0	5	0	2	0	1
Wakabayashi Cr	200	SKK0-29	0	1	0	4	0	5	0	0	0	1
Lenore Dr	Charlebois - Charlebois	SKK1-26	2	0	2	1	0	5	0	0	0	1
Charlebois Cr E Leg	Lenore Dr	SKK1-42	0	1	2	1	1	5	1	0	0	1
Meilicke Rd	David Knight - Russell Rd	SKK1-52	2	2	0	1	0	5	0	0	0	1
Lenore Dr	Cypress Cr - Redberry	SKLI-23	0	1	2	1	1	5	1	0	1	1
Lenore Dr	Silverwood - Whiteswan	SKM1-2	1	1	0	2	1	5	1	0	0	1
Lenore Dr	Whiteswan Dr	SKM1-3	2	0	1	2	0	5	0	0	0	1
Goerzen St	Russell Rd	SKK0-10	1	1	1	1	0	4	0	1	0	1
Molloy St	Bain - Bain	SKK0-2	0	2	0	0	2	4	2	1	1	1
Verbeke Rd	134 Gathercole - Verbeke Pl	SKK0-22	0	1	0	0	3	4	3	1	1	1
Adilman Dr	Silverwood Rd / Zeman Cr E	SKL0-3	2	1	0	1	0	4	0	0	0	1
Silverwood Rd	Chan / J J Thiessen - Meilicke	SKLI-36	1	1	2	0	0	4	0	0	0	1
Whiteswan Dr	400 Lenore - Silverwood	SKM1-1	0	0	0	3	1	4	1	0	0	1
Adilman Dr	Davies Rd - Spencer Cr	SKJ0-13	1	0	0	1	1	3	1	1	0	1
Adilman Dr	Davies Rd / Spencer Cr W	SKJ0-4	1	0	0	1	1	3	1	3	1	1
Goerzen St	Nordstrum Cr	SKJ0-5	1	1	0	1	0	3	0	2	0	1
Davies Rd	Peberdy - Peberdy	SKJ0-8	1	2	0	0	0	3	0	0	0	1
Girgulis Cr S Leg	100 Girgulis Cr - Russell	SKJ1-17	1	1	1	0	0	3	0	0	0	1
Nordstrum Rd	Allegretto - Thain	SKJ1-18	0	1	0	1	1	3	1	0	0	1
Rao Cr	Goerzen - Goerzen	SKJ1-19	1	0	1	0	1	3	1	0	0	1
Nordstum Rd	500 Sebestyen - Sebestyen	SKJ1-24	0	1	0	2	0	3	0	0	0	1
Cree Pl	Mid Block	SKJ2-21	2	1	0	0	0	3	0	0	0	1
Cree Cr	Cree Cr - Lenore	SKJ2-24	0	0	2	0	1	3	1	0	0	1
Rowles Rd	Russell Rd / Verbeke Cr	SKK0-1	1	0	1	0	1	3	1	1	0	1
Bain Cr	Molloy - Molloy	SKK0-26	0	1	1	1	0	3	0	0	0	1
Adilman Dr	Trotchie - Trotchie	SKK0-33	2	0	0	0	1	3	1	0	0	1
Davies Rd	Russell Rd	SKK0-7	1	0	1	1	0	3	0	0	0	1
Nordstrum Rd	Russell Rd	SKK1-10	0	2	1	0	0	3	0	0	0	1
Roborecki Cr	Roborecki Terr - Russell	SKK1-25	0	1	1	0	1	3	1	0	0	1
Charlebois Cr	300 Charlebois Cr - Charlebois	SKK1-37	2	0	1	0	0	3	0	0	0	1
Russell Rd	Lenore - Nordstum Rd	SKK1-48	1	0	1	1	0	3	0	0	0	1
David Knight Way	500	SKK1-59	0	2	1	0	0	3	0	0	0	1
Ball Cr	Silverwood Rd	SKL0-14	0	1	0	2	0	3	0	0	0	1
Adilman Dr	Mallin Cr E Leg	SKL0-22	0	2	0	0	1	3	1	0	0	1
Chan Cr	Mid Block	SKLI-8	1	2	0	0	0	3	0	0	0	1
Goerzen St	Rao Cr - Rao Cr	SKJ0-18	1	1	0	0	0	2	0	0	0	0
Peberdy Cr	400	SKJ0-22	0	0	0	1	1	2	1	0	0	0
Goerzen St	Nordstrum - Wanuskewin	SKJ0-30	0	1	1	0	0	2	0	0	0	0
Nordstrum Rd	400	SKJ1-25	0	0	2	0	0	2	0	0	0	0
Nordstum Rd	Goerzen - Sebestyen	SKJ1-30	0	0	0	1	1	2	1	0	0	0
Sebestyen Cr	300 Walkway	SKJ1-36	1	0	0	1	0	2	0	0	0	0

Street 1	Street 2	UGRID	2012	2013	2014	2015	2016	Total Number of Collisions (2012 - 2016)	Total Number of Collisions (2016)	Right Angle, Left Turn & Right Turn Only (2012 - 2016)	Right Angle, Left Turn & Right Turn Only (2016)	Average Number of Collisions (2012 - 2016)
Verbeke Rd	158 - 191 Gathercole - Gathercole	SKK0-11	1	1	0	0	0	2	0	0	0	0
Adilman Dr	200	SKK0-13	0	0	1	1	0	2	0	0	0	0
Verbeke Rd	300	SKK0-40	2	0	0	0	0	2	0	0	0	0
Adilman-Egnatoff Way	Rowles Rd	SKK0-46	0	1	1	0	0	2	0	0	0	0
Lenore Dr	200 Primrose - Redberry	SKKI-19	0	0	2	0	0	2	0	0	0	0
Charlebois W	Lenore Dr / Nokomis Cr	SKKI-22	0	0	0	1	1	2	1	0	0	0
Thain Cr	Russell - Thain Way	SKKI-23	1	1	0	0	0	2	0	1	0	0
Roborecki Cr	Roborecki 100 - Roborecki Ter	SKKI-49	0	0	0	1	1	2	1	0	0	0
Meilicke Rd	200 Stechishin - Stechishin	SKKI-50	0	1	1	0	0	2	0	0	0	0
Girgulis Cr N	Russell Rd	SKKI-51	0	0	1	0	1	2	1	0	0	0
Stechishin Cr	200 - 300	SKKI-53	0	0	1	0	1	2	1	0	0	0
Girgulis Cr S	Russell Rd	SKKI-8	1	0	1	0	0	2	0	0	0	0
Mallin Cr	100	SKL01-8	1	0	0	1	0	2	0	0	0	0
Molloy St	Broadbent - Silverwood	SKL0-2	1	0	1	0	0	2	0	0	0	0
Broadbent Ave	Adilman - Molloy	SKL0-4	1	0	0	1	0	2	0	0	0	0
Ball Cr	200	SKL0-5	0	0	0	1	1	2	1	0	0	0
Perreault Cr 200	100 - 300	SKL0-8	2	0	0	0	0	2	0	0	0	0
Meilicke Rd	J J Thiessen - Silverwood	SKLI-11	0	2	0	0	0	2	0	0	0	0
A E Adams Cr	200	SKLI-49	0	0	1	1	0	2	0	0	0	0
Whiteswan Dr	600 S Of Silverwood Rd	SKLI-60	1	0	0	1	0	2	0	0	0	0
JJThiessen Cr	JJ Thiessen Terr	SKLI-68	1	0	0	1	0	2	0	0	0	0
A E Adams Cr	A E Adams Lane - A E Adams Lane	SKMI-5	0	1	0	0	1	2	1	0	1	0
Wanuskevin Rd	Adilman - Goerzen	SKJ0-15	0	0	1	0	0	1	0	0	0	0
Spencer Lane	Mid Block	SKJ0-16	0	0	1	0	0	1	0	0	0	0
Marcotte Cr	Adilman - Davies	SKJ0-26	0	1	0	0	0	1	0	0	0	0
Peberdy Terr	Mid Block	SKJ0-28	0	0	0	1	0	1	0	0	0	0
Davies Rd	Adilman - Marcotte	SKJ0-37	1	0	0	0	0	1	0	0	0	0
Davies Rd	Wakabayashi Cres	SKJ0-38	0	0	1	0	0	1	0	0	0	0
Spencer Cr	Adilman Dr - Spencer Ln	SKJ0-39	0	0	0	1	0	1	0	0	0	0
Goerzen St	Rao Cr W	SKJ0-6	0	0	0	0	1	1	1	0	0	0
Davies Rd	Wakabayashi Way	SKJ0-9	0	0	0	0	1	1	1	0	0	0
Thain Cr	300	SKJI-20	0	0	1	0	0	1	0	1	0	0
Allegretto Cr	Nordstrum Rd W	SKJI-27	0	0	0	1	0	1	0	0	0	0
Girgulis Cr	Girgulis Cr	SKJI-35	0	0	0	1	0	1	0	0	0	0
Sebestyen Cr	500 Walkway	SKJI-37	0	0	1	0	0	1	0	0	0	0
Allegretto Way	200 Nordstrum Rd - Allegretto Cr	SKJI-9	0	0	0	1	0	1	0	0	0	0
Chomyn Cr	Rowles - Russell	SKK0-12	0	0	0	1	0	1	0	0	0	0
Neusch Cr	Adilman - Neusch 200	SKK01-4	1	0	0	0	0	1	0	0	0	0
Verbeke Rd	Molloy - Verbeke Rd	SKK0-16	1	0	0	0	0	1	0	0	0	0
Gathercole Cr	200	SKK0-19	0	1	0	0	0	1	0	0	0	0
Adilman Dr	Biro Pl / Russell Rd	SKK0-20	0	0	0	0	1	1	1	0	0	0
Kindrachuk Cr	100	SKK0-23	0	0	0	0	1	1	1	0	0	0
Benesh Cr	100	SKK0-24	0	0	0	1	0	1	0	0	0	0
Verbeke Cr	200	SKK0-25	0	0	0	0	1	1	1	0	0	0
Goerzen St	Rao Cr E	SKK0-28	0	0	1	0	0	1	0	0	0	0
Verbeke Cr E	Verbeke Rd	SKK0-34	0	0	0	1	0	1	0	1	0	0
Egnatoff Cr	Adilman - Egnatoff Cr 100	SKK0-35	0	0	0	1	0	1	0	0	0	0
Wakabayashi Cr	Russell - Wakabayashi Way	SKK0-38	0	0	1	0	0	1	0	0	0	0
Russell Rd	Davies - Goerzen	SKK0-41	1	0	0	0	0	1	0	0	0	0
Verbeke Cr	Mid Block	SKK0-42	0	0	0	0	1	1	1	0	0	0
Adilman Dr	Egnatoff Cr / Neusch Cr E	SKK0-5	0	0	1	0	0	1	0	0	0	0
Russell Rd	Wakabayashi Cr N Leg	SKK0-8	1	0	0	0	0	1	0	0	0	0
Russell Rd	Girgulis - Goerzen	SKKI-11	0	0	0	0	1	1	1	1	1	0
Russell Rd	Nordstrum - Thain	SKKI-13	0	0	1	0	0	1	0	0	0	0
Thain Way	200	SKKI-20	1	0	0	0	0	1	0	0	0	0
Charlebois Cr E Leg	Charlebois Way	SKKI-36	0	0	0	1	0	1	0	0	0	0
David Knight Rd	Meilicke Rd	SKKI-5	0	1	0	0	0	1	0	0	0	0
Nordstrum Rd	Thain Way - Thain Cr	SKKI-58	1	0	0	0	0	1	0	0	0	0
Nordstum Rd	Thain Cr E Leg	SKKI-60	0	0	1	0	0	1	0	0	0	0
Roborecki	Russell Rd / Thain Cr	SKKI-9	0	0	0	0	1	1	1	0	0	0

Street 1	Street 2	UGRID	2012	2013	2014	2015	2016	Total Number of Collisions (2012 - 2016)	Total Number of Collisions (2016)	Right Angle, Left Turn & Right Turn Only (2012 - 2016)	Right Angle, Left Turn & Right Turn Only (2016)	Average Number of Collisions (2012 - 2016)
Zeman Cr	300 Zeman Cr - Zeman Cr W L	SKL01-1	0	0	1	0	0	1	0	0	0	0
Mallin Cr E	100	SKL01-6	1	0	0	0	0	1	0	0	0	0
Adilman Dr	Mallin Cr W Leg	SKL0-23	0	0	0	0	1	1	1	0	0	0
Gustin Cr 300	Gustin Cr 200 - Silverwood	SKL0-25	0	1	0	0	0	1	0	0	0	0
Adilman Dr	Zeman Cr	SKL0-30	0	1	0	0	0	1	0	0	0	0
Gustin Cr 200	Gustin Cr 100 - Gustin Cr 300	SKL0-31	0	1	0	0	0	1	0	0	0	0
Gustin Pl	Mid Block	SKL0-32	1	0	0	0	0	1	0	0	0	0
Adilman Dr	400 Zeman Cr E Leg - Zeman Cr	SKL0-33	0	0	0	0	1	1	1	0	0	0
Ball Pl	Mid Block	SKL0-36	0	0	0	1	0	1	0	0	0	0
Silverwood Rd	Whiteswan Dr	SKL0-6	0	0	1	0	0	1	0	0	0	0
Meilicke Rd	Silverwood Rd	SKL1-10	0	0	0	1	0	1	0	0	0	0
Lenore Dr	La Loche Rd	SKL1-4	0	1	0	0	0	1	0	0	0	0
A E Adams / O'Brien Cr E	Silverwood Rd	SKL1-42	1	0	0	0	0	1	0	0	0	0
A E Adams Way	Mid Block	SKL1-51	0	0	0	0	1	1	1	0	0	0
Chan Cr	Silverwood Rd	SKL1-67	1	0	0	0	0	1	0	0	0	0
La Loche Rd	Lenore Dr	SKN5-93	0	0	1	0	0	1	0	0	0	0

APPENDIX G: PUBLIC MEETING #2 – NOVEMBER 23, 2017 MINUTES

Silverwood Heights Neighbourhood Traffic Review
Thursday, November 23, 2017, 7:00 PM – 9:00 PM
Marion Graham Collegiate (602 Lenore Drive)

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 & Kathy Dahl, Facilitators)

2. Traffic Management Presentation

(Presented by Mariniel Flores, Transportation Engineer)

- Presentation Outline
 - Neighbourhood Traffic Review Process
 - Silverwood Heights Review Schedule
 - What We Heard
 - What We Did
 - What We Propose
- Neighbourhood Traffic Review Process
 - Mandate – Address neighbourhood traffic issues on local and collector streets
 - Speeding
 - Shortcutting
 - Pedestrian safety
 - Intersection safety
 - 2017 – Silverwood Heights, Pleasant Hill, North Park / Richmond Heights, Dundonald, Buena Vista, Queen Elizabeth / Exhibition, Wildwood, Erindale / Arbor Creek
- Silverwood Heights Review Schedule
 - Stage 1 – Identify issues & possible solutions through community consultation (May 2017 to November 2017)
 - Stage 2 – Develop a draft traffic plan
 - Stage 3 – Present draft traffic plan to community for feedback (November 2017)
 - Stage 4 – Implement changes over time (Beginning Spring 2018)
- What We Heard
 - Speeding Concerns
 - Adilman Dr

- Allegretto Way
 - Davies Rd
 - Georzen St
 - Lenore Dr
 - Meilicke Rd
 - Molloy St
 - Nordstrum Rd
 - Primrose Dr
 - Roborecki Cres
 - Russell Rd
 - Silverwood Rd
 - Wanuskewin Rd
 - Whiteswan Dr
 - Verbeke Rd
- Shortcutting Concerns
 - Georzen St
 - Roborecki Cres
 - Silverwood Rd
 - Whiteswan Dr
- Pedestrian Safety and/or Intersection Concerns
 - Adilman Dr
 - Georzen St
 - Lenore Dr
 - Meilicke Rd
 - Molloy St
 - Russell Rd
 - Silverwood Rd
 - Wanuskewin Rd
 - Whiteswan Dr
 - Verbeke Rd
- Other Concerns
 - Damaged Signs
 - Missing Sidewalks
 - Trees Obstructing Signs
 - Damaged Median Islands
 - Snow Removal
 - Drainage
 - Major Intersections
- What We Did
 - Compiled Information Received
 - Past studies
 - Comments from initial meeting
 - Resident responses (phone calls, emails, letters)
 - Comments from Shaping Saskatoon
 - Collected Data

- 18 intersection/pedestrian counts
 - 19 – 3-day traffic counts (24 hour) & speed measurements
 - Collision data
- Site Visits / Field Reviews
- Assessed Concerns
- Generated Proposed Recommendations
- What We Propose
 - Zebra Crosswalks
 - School Ahead Warning Sign
 - U-Turn Prohibited Signs
 - Median Islands
 - Curb Extensions
 - Speed Display Boards

3. Table Group Discussions

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

Refer to Discussion Summary attachment for small group comments

4. Next Steps

(Presented by Mariniel Flores, Transportation Engineer)

1. Send comments no later than December 22, 2017
2. Additional public input via Shaping Saskatoon website no later than December 22, 2017 at <http://shapingsaskatoon.ca/discussions/silverwood-heights-neighbourhood-traffic-review>
3. Additional consultation if required
4. Present traffic plan to City Council as information
5. If City Council approval is required, an additional recommendation will be included in the report to City Council
6. What if I don't agree?
 - 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 meeting and/or City Council meeting.
 - If approved, recommendations will be 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

- Resident: Put an additional traffic light at Wanuskewin Rd & Independent Grocer
- Resident: There are truck concerns.

List of Representatives

- Mitch Riabko, Kathy Dahl – Great Works Consulting, Facilitators
- Mariniel Flores, P.Eng. – City of Saskatoon, Transportation & Utilities, Transportation Engineer
- Sheliza Kelts, P.Eng. – City of Saskatoon, Transportation & Utilities, Transportation Engineer
- Lanre Akindipe, P.Eng. – City of Saskatoon, Transportation & Utilities, Acting Senior Transportation Engineer
- Goran Lazic, P.Eng. – City of Saskatoon, Transportation & Utilities, Senior Transportation Engineer
- Councillor Randy Donauer – City of Saskatoon

Silverwood Heights Neighbourhood Traffic Review: Table Group Discussions

Item	Location	Recommendation	Reason	Group 1: Sheliza Kelts	Group 2: Lanre Akindipe	Group 3: Goran Lasic	Group 4: Mariniel Flores
1	West of Adilman Dr & Davies Rd / Spencer Cres (W)	Relocate 50 km/hr speed limit sign for eastbound traffic	Improve visibility of speed limit sign to reduce driver speed		Difficult to make left-turns off Davies Rd due to vehicles speeding off Wanuskewin Rd so tighten radius for northbound right-turns off Wanuskewin Rd onto Adilman Rd	Not just eastbound traffic but also speeding in the westbound direction east of Davies Rd	Ok; Suggest speed hump
2	Adilman Dr & Neusch Cres (W) / Egnatoff Cres (W)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed			In favour	Ok; Suggest zebra crosswalk if standard crosswalk is present
3	Goerzen St & Nordstrum Rd	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed		Difficult to make left-turns off Nordstrum Rd due to vehicles speeding off Wanuskewin Rd so tighten radius for northbound right-turns off Wanuskewin Rd onto Goerzen St	Willing to try it	Some like median island; Zebra crosswalk at Nordstrum Rd and at Rao Cres (E) suggested; Some want speed humps
4	Russell Rd & Girgulis Cres (N)	Install curb extension on east side of north crosswalk; Upgrade standard crosswalk to a zebra crosswalk on the north leg; Provide speed data to Saskatoon Police Service for enforcement	Improve pedestrian safety; Reduce driver speed			In favour of curb extension; Look at speed display board instead of "Children at Play" sign	It was suggested that there be flashing lights that are motion-detected with 30 km/hr sign on the curb extension to remind motorists; Roll-out signs are good
5	Russell Rd & Goerzen St	Upgrade standard crosswalk to a zebra crosswalk on the south leg	Improve pedestrian safety		Yellow crosswalk suggested similar to crosswalks in Edmonton		Ok
6	Russell Rd & Davies Rd	Upgrade standard crosswalk to a zebra crosswalk on the north leg	Improve pedestrian safety			In favour	Ok; Suggest curb extension
7	Molloy St & Bain Cres (W) / Kindrachuk Cres (W)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed				Ok; Appears to be ok in terms of speeding; Most likely local traffic
8	Silverwood Rd & O'Brien Cres (E) / A.E. Adams Cres (W)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed	There was a temporary curb extension recently; Issue could also be sight lines; May require advance pedestrian crossing sign			Ok; Blind corner
9	Silverwood Rd & Whiteswan Dr	Install median island on north leg; Install curb extension on west side of north crosswalk; Install curb extension on east side of south crosswalk; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed; Improve pedestrian safety			Good	Some want; Some want flashing lights at school zone limits; Speed hump suggested; One suggested a three-way stop at Meilicke Rd
10	Silverwood Rd [Ball Cres (N) to Ball Cres (S)]	Install School Ahead warning sign for southbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed		School Ahead signs should be placed before the schools; Suggested School Ahead signs for both schools in both directions		Ok; Suggest speed display board
11	Silverwood Rd & Molloy St / Perreault Cres (S)	Paint stop bars for eastbound and westbound traffic	Improve driver compliance				Ok; Suggest stop line signs; Suggest relocating stop sign

Silverwood Heights Neighbourhood Traffic Review: Table Group Discussions

Item	Location	Recommendation	Reason	Group 1: Sheliza Kelts	Group 2: Lanre Akindipe	Group 3: Goran Lazic	Group 4: Mariniel Flores
12	Whiteswan Dr & Wastewater Treatment Plant Access	Install curb extensions and median island on east leg	Reduce driver speed	Pedestrian accommodation required south of this intersection (across trail to match what was at Whiteswan Dr & A.E. Adams Cres Walkway (W) from an old study	Suggested solid double yellow line to restrict cars passing each other		Ok
13	Whiteswan Dr [A.E. Adams Cres Walkway (W) to A.E. Adams Cres Walkway (E)]	Install speed display board for eastbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed		40 km/hr sign placed on Whiteswan Dr northbound; There should be one southbound; Crosswalk on Whiteswan Dr close to walk paths; Suggested multi-use pathway on Whiteswan Dr		Ok
14	Whiteswan Dr & A.E. Adams Cres Walkway (W)	Install median island	Reduce driver speed	From old study	Trucks use Whiteswan Dr; Is it a truck route? (See Questions & Answers section in meeting minutes for answer)	Suggest curb extension	Ok; Connectivity issues - need to create connection to pathway
Item	Location	Recommendation	Reason	Group 1: Sheliza Kelts	Group 2: Lanre Akindipe	Group 3: Goran Lazic	Group 4: Mariniel Flores
15	Lenore Dr (Wanuskewin Rd to Russell Rd)	Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed	May require u-turn at Cree Cres	Speeds should be reduced to 50 km/hr from Wanuskewin Rd to Russell Rd		Ok
16	Lenore Dr & Russell Rd / Primrose Dr	Install U-Turn Prohibited sign for eastbound traffic	Improve safety	Eastbound and northbound left-turn lane is backed up			Ok: Enforcement
17	Lenore Dr & La Loche Rd	Upgrade standard crosswalk to a zebra crosswalk on the east leg; Install U-Turn Prohibited sign for westbound traffic	Improve pedestrian safety	Not in favour; Medians prohibit movements elsewhere			Some not in support; Install u-turn opening elsewhere or move Active Pedestrian Corridor
18	Lenore Dr & Cypress Cr	Upgrade standard crosswalk to a zebra crosswalk on the east leg	Improve pedestrian safety				Ok
19	Lenore Dr [Cypress Cr to Redberry Rd (E)]	Install speed display board for westbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed	Not sure if worthwhile investment; Allow u-turns			Ok
20	Lenore Dr & Redberry Rd (E)	Upgrade standard crosswalk to a zebra crosswalk on west leg; Install U-Turn Prohibited sign for eastbound traffic	Improve pedestrian safety	Don't want u-turn prohibited			Some not in support; Install u-turn opening elsewhere or move Active Pedestrian Corridor

Additional Comments

Item	Location	Comments
1	Adilman Dr	Blind spots and busy intersections near Spencer Cres (E) / Rowles Rd and near Neusch Cres (W) / Egnatoff Cres (W)
2	Adilman Dr & Davies Rd / Spencer Cres (W)	Hard to make a left-turn off Davies Rd onto Adilman Dr
3	Adilman Dr & Spencer Cres (E) / Rowles Rd	Suggest pedestrian crosswalks and calming devices
4	Allegretto Crescent	Speeding issues along this roadway not along Allegretto Way
5	Lenore Dr	Make u-turn facilities along Lenore Dr possibly at La Loche Rd
6	Marcotte Cres	Shortcutting issues
7	Marquis Dr	This is a no whistle zone but CN continues to blow horn
8	Meilicke Rd near Russell Rd	No parking suggested along the north side of the curve since there are large trucks that are parked; Narrow roadway in the winter due to the snow - snow needs to be cleared and hauled away
9	Neusch Way & Neusch Cres	Parking too close to intersection
10	Nordstrum Rd	Speeding issues along curve with advisory speed of 30 km/hr; Relocate 30 km/hr sign north; Speeding along this roadway makes it unsafe for Nordstrum Cr; Speeding
11	Primrose Dr	Traffic timing plan for through traffic at library and mall needs to be looked at
12	Redberry Rd & Primrose Dr	Pedestrian red flashing to yellow flashing

Silverwood Heights Neighbourhood Traffic Review: Table Group Discussions

Item	Location	Comments
13	Russell Rd & Meilicke Rd	Install median on south leg to prevent illegal maneuver; Enforcement for people that are not complying; Needs sanding as it is icy
14	Russell Rd & Nordstrum Rd	Sight line issues on northwest corner
15	Silverwood Rd & Molloy St / Perreault Cres (S)	Poor sight line due to truck parked on northwest corner
16	Silverwood Rd School Zone	Suggest speed display boards; U-turns are an issue (signs were requested but is not on the recommendation list)
17	Verbeke Rd	Speed humps or reduced school zone from Gathercole Cres to Verbeke PI park opening similar to Acadia Dr & Dalhousie Cres where there is a school zone at the park opening
18	Wanuskewin Rd	Signal timing progression for Goerzen St
19	Wanuskewin Rd & Independent Grocer	Suggest traffic signal; Accidents so traffic light suggested even though it is close to the traffic lights at Lenore Dr
20	Wanuskewin Rd & Lenore Dr	Westbound left-turn bay needs to be longer; Want protected left-turn arrow every time the light turns green
21	Warman Rd & Circle Dr	Do not like the right-turn yield; Add a merge lane to Circle Dr
22	Whiteswan Dr & Ball Cres Walkway	Suggested crosswalk at this mid-block location
23	General	Is the property south of recommendations #12 to #14 the City's? (<i>The City owns the property south of the Wastewater Treatment Plant</i>); Speed display boards in school zones; Is the threshold adjusted after school hours? Review school zone limits; School zone hours should be all day; Install park lighting in WJL Harvey South Park

APPENDIX H: DECISION MATRIX

Item	Location	Recommendation	Reason	Group 1: Sheliza Kelts	Group 2: Lanre Akindipe	Group 3: Goran Latic	Group 4: Mariniel Flores	Decision
1	West of Adilman Dr & Davies Rd / Spencer Cres (W)	Relocate 50 km/hr speed limit sign for eastbound traffic	Improve visibility of speed limit sign to reduce driver speed		Difficult to make left-turns off Davies Rd due to vehicles speeding off Wanuskewin Rd so tighten radius for northbound right-turns off Wanuskewin Rd onto Adilman Rd	Not just eastbound traffic but also speeding in the westbound direction east of Davies Rd	Ok; Suggest speed hump	Carried
2	Adilman Dr & Neusch Cres (W) / Egnatoff Cres (W)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed			In favour	Ok	Carried
3	Goerzen St & Nordstrum Rd	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed		Difficult to make left-turns off Nordstrum Rd due to vehicles speeding off Wanuskewin Rd so tighten radius for northbound right-turns off Wanuskewin Rd onto Goerzen St	Willing to try it	Some like median island; Zebra crosswalk at Nordstrum Rd and at Rao Cres (E) suggested; Some want speed humps	Carried
4	Russell Rd & Girgulis Cres (N)	Install curb extension on east side of north crosswalk; Upgrade standard crosswalk to a zebra crosswalk on the north leg; Provide speed data to Saskatoon Police Service for enforcement	Improve pedestrian safety; Reduce driver speed			In favour of curb extension; Look at speed display board instead of "Children at Play" sign	It was suggested that there be flashing lights that are motion-detected with 30 km/hr sign on the curb extension to remind motorists; Roll-out signs are good	Carried
5	Russell Rd & Goerzen St	Upgrade standard crosswalk to a zebra crosswalk on the south leg	Improve pedestrian safety		Yellow crosswalk suggested similar to crosswalks in Edmonton		Ok	Carried
6	Russell Rd & Davies Rd	Upgrade standard crosswalk to a zebra crosswalk on the north leg	Improve pedestrian safety			In favour	Ok; Suggest curb extension	Carried
7	Molloy St & Bain Cres (W) / Kindrachuk Cres (W)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed				Ok; Appears to be ok in terms of speeding; Most likely local traffic	Carried
8	Silverwood Rd & O'Brien Cres (E) / A.E. Adams Cres (W)	Install median island on west leg; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed	There was a temporary curb extension recently; Issue could also be sight lines; May require advance pedestrian crossing sign			Ok; Blind corner	Carried
9	Silverwood Rd & Whiteswan Dr	Install median island on north leg; Install curb extension on west side of north crosswalk; Install curb extension on east side of south crosswalk; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed; Improve pedestrian safety			Good	Some want; Some want flashing lights at school zone limits; Speed hump suggested; One suggested a three-way stop at Meilicke Rd	Carried
10	Silverwood Rd [Ball Cres (N) to Ball Cres (S)]	Install School Ahead warning sign for southbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed		School Ahead signs should be placed before the schools; Suggested School Ahead signs for both schools in both directions		Ok; Suggest speed display board	Carried
11	Silverwood Rd & Molloy St / Perreault Cres (S)	Paint stop bars for eastbound and westbound traffic	Improve driver compliance				Ok; Suggest stop line signs; Suggest relocating stop sign	Carried

Item	Location	Recommendation	Reason	Group 1: Sheliza Kelts	Group 2: Lanre Akindipe	Group 3: Goran Lazic	Group 4: Mariniel Flores	Decision
12	Whiteswan Dr & Wastewater Treatment Plant Access	Install curb extensions and median island on east leg	Reduce driver speed	Pedestrian accommodation required south of this intersection (across trail to match what was at Whiteswan Dr & A.E. Adams Cres Walkway (W) from an old study	Suggested solid double yellow line to restrict cars passing each other		Ok	Carried
13	Whiteswan Dr [A.E. Adams Cres Walkway (W) to A.E. Adams Cres Walkway (E)]	Install speed display board for eastbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed		40 km/hr sign placed on Whiteswan Dr northbound; There should be one southbound; Crosswalk on Whiteswan Dr close to walk paths; Suggested multi-use pathway on Whiteswan Dr		Ok	Carried
14	Whiteswan Dr & A.E. Adams Cres Walkway (W)	Install median island	Reduce driver speed	From old study	Trucks use Whiteswan Dr	Suggest curb extension	Ok; Connectivity issues - need to create connection to pathway	Carried
15	Lenore Dr (Wanuskewin Rd to Russell Rd)	Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed	May require u-turn at Cree Cres	Speeds should be reduced to 50 km/hr from Wanuskewin Rd to Russell Rd		Ok	Carried
16	Lenore Dr & Russell Rd / Primrose Dr	Install U-Turn Prohibited sign for eastbound traffic	Improve safety	Eastbound and northbound left-turn lane is backed up			Ok: Enforcement	Carried
17	Lenore Dr & La Loche Rd	Upgrade standard crosswalk to a zebra crosswalk on the east leg; Install U-Turn Prohibited sign for westbound traffic	Improve pedestrian safety	Not in favour; Medians prohibit movements elsewhere			Some not in support; Install u-turn opening elsewhere or move Active Pedestrian Corridor	Carried
18	Lenore Dr & Cypress Crt	Upgrade standard crosswalk to a zebra crosswalk on the east leg	Improve pedestrian safety				Ok	Carried
19	Lenore Dr [Cypress Crt to Redberry Rd (E)]	Install speed display board for westbound traffic; Provide speed data to Saskatoon Police Service for enforcement	Reduce driver speed	Not sure if worthwhile investment; Allow u-turns			Ok	Carried
20	Lenore Dr & Redberry Rd (E)	Upgrade standard crosswalk to a zebra crosswalk on west leg; Install U-Turn Prohibited sign for eastbound traffic	Improve pedestrian safety	Don't want u-turn prohibited			Some not in support; Install u-turn opening elsewhere or move Active Pedestrian Corridor	Carried

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

Item	Location	Comments	Response
1	Adilman Drive & Davies Road / Spencer Crescent (W)	Difficult to make a left-turn off Davies Rd onto Adilman Dr	Site visits and field reviews confirm that current devices are providing adequate traffic control
2	Adilman Drive & Spencer Crescent (E) / Rowles Road	Blind spots and busy intersection; Suggest pedestrian crosswalks and calming devices	Site visits and field reviews confirm that sight lines are adequate and there are no pedestrian safety issues
3	Adilman Drive & Neusch Crescent (W) / Egnatoff Crescent (W)	Blind spots and busy intersection Suggest zebra crosswalk if standard crosswalk is present	Traffic count will be collected in spring 2018 – added to the recommendation list
4	Allegretto Crescent	Speeding issues along this roadway not along Allegretto Way	Speed assessment will be completed in spring 2018 – added to the recommendation list
5	Lenore Drive	Make u-turn facilities along Lenore Dr possibly at La Loche Rd	U-Turn Prohibited sign for eastbound traffic is recommended; U-turns allowed for westbound traffic
6	Marcotte Crescent	Shortcutting issues	Traffic volume assessment will be completed in spring 2018 – added to the recommendation list
7	Marquis Drive	This is a no whistle zone but Canadian National (CN) Railway continues to blow horn	Forwarded to CN Railway
8	Meilicke Road near Russell Road	No parking suggested along the north side of the curve since there are large trucks that are parked; Narrow roadway in the winter due to the snow so snow needs to be cleared and hauled away	This is the standard width for a collector roadway; Concern regarding snow removal forwarded to Roadways & Operations
9	Neusch Way & Neusch Crescent	Parking too close to intersection	Forwarded to Parking Services
10	Nordstrum Road	Speeding issues along curve with advisory speed of 30 km/hr; Relocate 30 km/hr sign north; Speeding along this roadway makes it unsafe for Nordstrum Crt	Speed assessment will be completed in spring 2018 – added to the recommendation list
11	Primrose Drive	Traffic timing plan for through traffic at library and mall needs to be looked at	Will be reviewed as part of Lawson Heights Suburban Centre Neighbourhood Traffic Review
12	Redberry Road & Primrose Drive	Suggest a pedestrian device that flashes from red to yellow	This type of pedestrian device is not standard practice and is not in use in the City at this time
13	Russell Road & Meilicke Road	Install median on south leg to prevent illegal maneuver; Enforcement for people that are not complying	A median on the south leg already exists; Comment regarding enforcement forwarded to Saskatoon Police Service
		Needs sanding as it is icy	Forwarded to Roadways & Operations
14	Russell Road & Nordstrum Road	Sight line issues on northwest corner	Forwarded to Bylaw Compliance
15	Silverwood Road & Molloy Street / Perreault Crescent (S)	Poor sight line due to truck parked on northwest corner	Site visits and field reviews confirm that sight lines are adequate / Forwarded to Parking Services

Item	Location	Comments	Response
16	Silverwood Road School Zone	Suggest speed display boards; U-turns are an issue (signs were requested but is not on the recommendation list)	U-turns are prohibited in the entire school zone. No u-turn signs would create driver confusion as to whether u-turns are allowed past the signs. Therefore, no u-turn signs are not installed in school zones; Forwarded to Saskatoon Police Service for enforcement
17	Spadina Crescent	Install No Passing sign between Pinehouse Dr and Ravine Dr	Will be reviewed as part of Lawson Heights / River Heights Neighbourhood Traffic Review
18	Verbeke Road	Speed humps or reduced school zone from Gathercole Cres to Verbeke PI park opening similar to Acadia Dr & Dalhousie Cres where there is a school zone at the park opening	Speed assessment completed in September 2017 indicates that traffic is travelling below the posted speed limit; City-wide review of school & playground zones will be completed
19	Wanuskewin Road	Signal timing progression to improve traffic flow at Goerzen St and at Adilman Dr	Will be reviewed when the North Commuter Parkway opens
20	Wanuskewin Road & Independent Grocer	Suggest traffic signal; Accidents so traffic light suggested even though it is close to the traffic lights at Lenore Dr	Traffic signal is not warranted; Not a high-collision location based on collision data review
21	Wanuskewin Road & Lenore Drive	Westbound left-turn bay needs to be longer; Want protected left-turn arrow every time the light turns green	Will be reviewed as part of Major Intersections Review
22	Warman Road & Circle Drive	Do not like the right-turn yield; Add a merge lane to Circle Dr	Merge lanes to Circle Drive are provided and are adequate in length
23	Whiteswan Drive & Ball Cres Walkway	Suggested crosswalk at this mid-block location	Site visits and field reviews confirms no pedestrian safety issues
		Install No Passing sign	There is adequate sight distance on this section of road to make safe passing maneuvers so passing is permitted
24	General	Is the property south of recommendations #12 to #14 the City's?	The City owns the property south of the Wastewater Treatment Plant
		Is the threshold for speed display boards adjusted after school hours?	Different speed and time thresholds can be set
		Review school zone limits; School zone hours should be all day	City-wide review of school zones will be completed
		Install park lighting in WJL Harvey South Park	Forwarded to Saskatoon Light & Power & Parks