

# PLEASANT HILL

## 2017 NEIGHBOURHOOD TRAFFIC REVIEWS



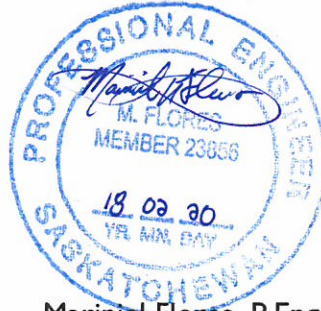
City of Saskatoon  
February 8, 2018

# Pleasant Hill Neighbourhood Traffic Review

February 12, 2018

Authorization

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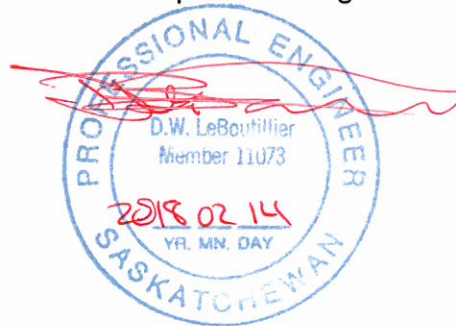
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## **Acknowledgements**

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*Cover Photograph Matt Ramage*

## 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 April of 2017 to identify traffic concerns and potential solutions within the Pleasant Hill 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 September of 2017.

A summary of recommended improvements for the Pleasant Hill neighbourhood is included in **Table ES-1**. The summary identifies the locations, recommendations, and reason. 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.

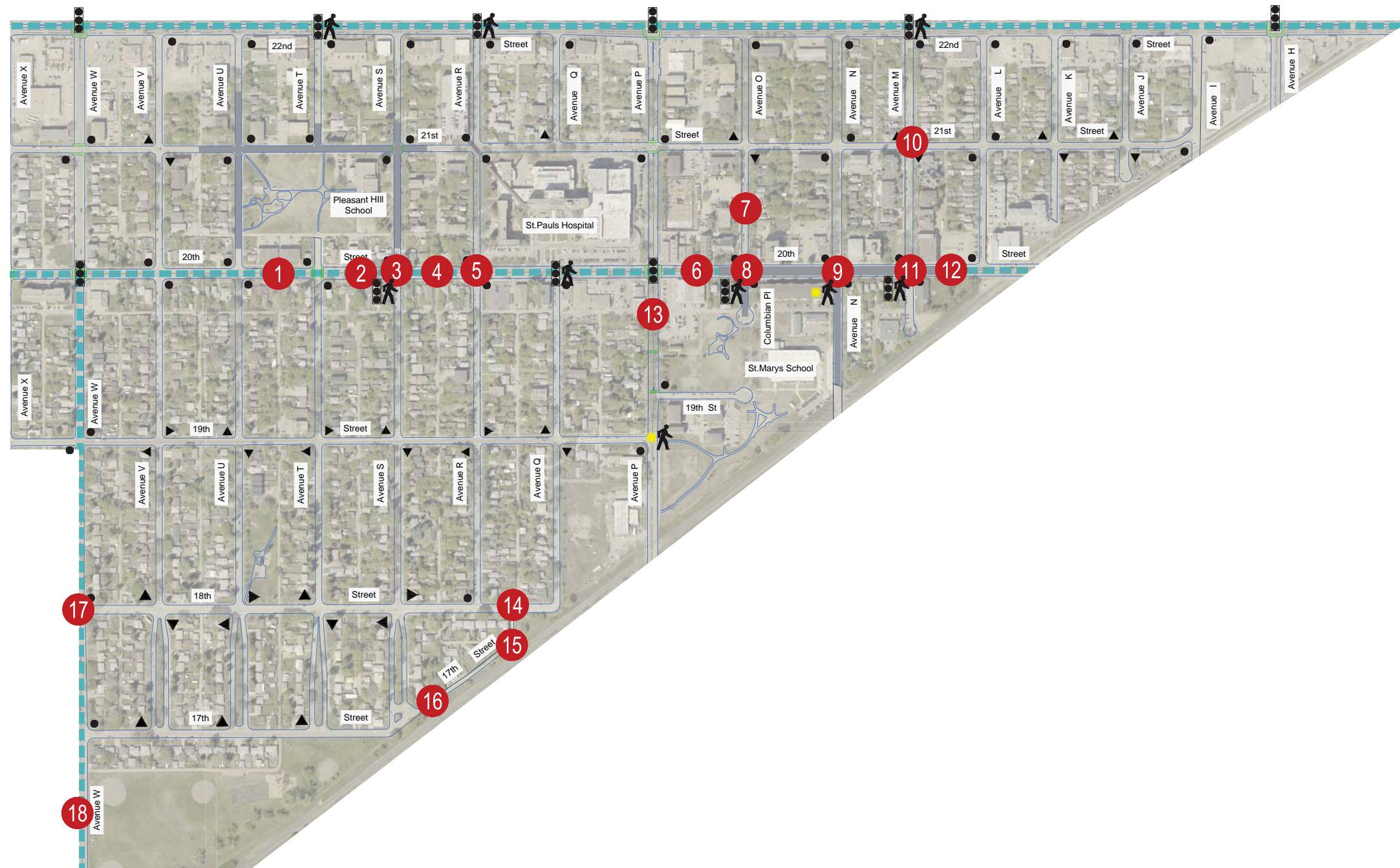
The Pleasant Hill Traffic Plan is illustrated in **Exhibit ES-1**.

**Table ES-1: Pleasant Hill Neighbourhood Recommended Improvements**

Item	Location	Recommendation	Reason
1	20 <sup>th</sup> Street (Avenue T and Avenue U)	Install speed display board facing eastbound traffic	Reduce speed
2	20 <sup>th</sup> Street east of Avenue T	Install Right Turn Only Lane sign for westbound traffic	Improve driver expectancy
3	20 <sup>th</sup> Street & Avenue S	Install Pedestrians Prohibited / Allowed / Arrow signs for northbound & southbound pedestrians on east leg	Improve pedestrian crossing compliance
		Install zebra crosswalks on west and north legs	Improve pedestrian safety
4	20 <sup>th</sup> Street west of Avenue R	Remove Right Lane Ends warning sign on north side of 20th Street for westbound traffic	Improve driver expectancy
5	20 <sup>th</sup> Street & Avenue R	Install a "No Parking" sign on south side of 20th Street 15 metres west of Avenue R	Improve visibility / sightlines
6	20 <sup>th</sup> Street (Avenue O and Avenue P)	Install School Ahead warning sign for eastbound traffic	Improve visibility of school zone signs; Reduce speed
7	Avenue O (20 <sup>th</sup> Street and 21 <sup>st</sup> Street)	Install "2 Hour Parking" signs on west side of Avenue O	Promote parking turnover
8	20 <sup>th</sup> Street & Avenue O / Columbian Place	Relocate overhead School Ahead warning sign closer to traffic signal head	Improve visibility of school zone signs; Reduce speed
		Install zebra crosswalk on west leg	Improve pedestrian safety
		Modify pedestrian signal timing	Reduce pedestrian waiting time
9	20 <sup>th</sup> Street & Avenue N	Install zebra crosswalk on west leg	Improve pedestrian safety
10	21 <sup>st</sup> Street & Avenue M	Traffic count in spring 2018	Determine if improvements are needed
11	20 <sup>th</sup> Street & Avenue M	Relocate overhead School Ahead warning sign closer to traffic signal head	Improve visibility of school zone signs; Reduce speed
		Install zebra crosswalk on east leg	Improve pedestrian safety
12	20 <sup>th</sup> Street (Avenue L and Avenue M)	Install School Ahead warning sign for westbound traffic	Improve visibility of school zone signs; Reduce speed

**Table ES-I Continued**

<b>Item</b>	<b>Location</b>	<b>Recommendation</b>	<b>Reason</b>
13	Avenue P & Affinity Credit Union Driveway	Install "2 Hour Parking" signs on east side of Avenue P north of Affinity Credit Union driveway	Promote parking turnover
		Install "No Parking" signs on east side of Avenue P six metres from each side of Affinity Credit Union driveway	Improve visibility / sightlines
14	18 <sup>th</sup> Street & Avenue Q	Remove Road Narrows warning sign and 20 kph Advisory Speed warning sign; Install stop sign for northbound traffic	Improve safety
15	17 <sup>th</sup> Street & Back Lane south of 18 <sup>th</sup> Street	Install One-Way signs for southbound traffic; Install Curve warning sign and 20 kph Advisory Speed warning sign for southbound traffic	Improve pedestrian safety
16	17 <sup>th</sup> Street & Avenue S	Remove Road Narrows warning sign and 20 kph Advisory Speed warning sign; Install Entry Prohibited sign for eastbound traffic	Improve driver expectancy
17	18 <sup>th</sup> Street & Avenue W	Traffic count in spring 2018	Determine if pedestrian improvements are needed
18	Avenue W (17 <sup>th</sup> Street and Appleby Drive)	Speed assessment in spring 2018	Determine if improvements are needed



### LEGEND

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

# PLEASANT HILL TRAFFIC PLAN

Exhibit ES-1





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## I INTRODUCTION

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

The Pleasant Hill neighbourhood is located south of 22<sup>nd</sup> Street, north of Canadian Pacific rail lines and east of Avenue W. The land use is mostly residential with elementary schools on Avenue S (Pleasant Hill School) and Avenue N (St. Mary's School) and St. Paul's Hospital on 20<sup>th</sup> Street.

The neighbourhood traffic review includes four stages:

- **Stage 1** - Identify issues, concerns and possible solutions through the initial neighbourhood consultation and the Shaping Saskatoon online discussion.
- **Stage 2** - Develop a draft traffic plan based on residents' input and traffic assessments.
- **Stage 3** - Present the draft traffic plan to the neighbourhood at a follow-up meeting; circulate the plan to other civic divisions for feedback; make adjustments as needed; and present the plan to City Council for approval.
- **Stage 4** - Implement the proposed measures in a specific time frame – short-term (1 to 2 years), medium-term (3 to 5 years) or long-term (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 April 13, 2017 to identify traffic concerns within the Pleasant Hill 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:

- 17<sup>th</sup> Street between Avenue R and Avenue P
- 1700 block of 17<sup>th</sup> Street
- 19<sup>th</sup> Street at Avenue R and between Avenue R and Avenue P
- 200 block of Avenue V
- Avenue O & 21<sup>st</sup> Street
- Avenue W
- St. Mary's School back lane
- 20<sup>th</sup> Street
  - Through St. Mary's school zone because sign is not visible
  - Near hospital
  - Between Avenue R and Avenue T
- Avenue O
  - Between 20<sup>th</sup> Street and 21<sup>st</sup> Street
  - Near churches (St. Mary's Parish)
  - High traffic volumes
- Avenue P
  - Double trailer semis travel through residential area south to 11<sup>th</sup> Street
- General
  - Vehicles passing on the right through intersections

The following solutions were proposed by residents:

- 1700 block of 17<sup>th</sup> Street
  - Traffic calming devices
  - Close road
- 19<sup>th</sup> Street
  - Traffic calming at Avenue R
- 20<sup>th</sup> Street
  - Improve visibility of school zone sign
  - Sign board
  - Reduced speed zone near hospital
  - Implement speed zone between Avenue R and Avenue U
  - More visible indicators of school zone
- Avenue O & 21<sup>st</sup> Street
  - Include in the 30 kph school zone
- Avenue O
  - Reduce speed limits around churches (St. Mary's Parish)
- Avenue O South
  - School zone sign is missing or not visible northbound towards 20<sup>th</sup> Street
- St. Mary's School Back Lane
  - Speed bumps
- General
  - School zone signs need to be bigger or posted with brighter colours

## 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:

- 20<sup>th</sup> Street
  - Pedestrian safety concerns between Avenue R and Avenue U
- 20<sup>th</sup> Street & Columbian Place
  - Pedestrian Actuated Signal is not being used
- 21<sup>st</sup> Street
  - Missing sidewalk on both sides between Avenue V and Avenue W
  - Children walk on the road due to a missing sidewalk on the north side between Avenue I and Avenue P
- 22<sup>nd</sup> Street
  - Pedestrian safety issues at T-intersections
- Avenue P & 20<sup>th</sup> Street
  - Pedestrian are not pressing the Pedestrian Actuated Signal push-button
  - Long wait time for pedestrians
  - High traffic volumes
- Avenue P & 21<sup>st</sup> Street
  - Street lighting is insufficient at night
- Avenue R & 20<sup>th</sup> Street
  - Pedestrian safety issues
- Avenue W & 18<sup>th</sup> Street
  - Parked vehicles make it difficult to see pedestrians
  - Cars do not stop for pedestrians and pass on the right
- Avenue W & 21<sup>st</sup> Street
  - Senior pedestrians do not have enough time to cross during gaps in traffic

- General
  - Jaywalking by hospital and along 20<sup>th</sup> Street at Avenues N, O and P
  - Paths in DL Hamilton Park is well-used but has no lighting
  - Generally unsafe for pedestrians at crossings and ramps

The following solutions were proposed by residents:

- 20<sup>th</sup> Street
  - 30 kph school zone between Avenue R and Avenue U
- 20<sup>th</sup> Street & Avenue S
  - Crosswalk lights
- 21<sup>st</sup> Street
  - Install sidewalk on both sides between Avenue V and Avenue W
  - Install sidewalk on the north side between Avenue I and Avenue P
- Avenue O & 20<sup>th</sup> Street
  - Audible pedestrian signals
- Avenue P & 20<sup>th</sup> Street
  - “Don’t Walk” instead of a hand symbol
  - Audible pedestrian signals
  - Active beacon
  - Shorten call time
  - Improve crossing for wheelchairs and cyclists with trailer
- Avenue N & 20<sup>th</sup> Street
  - Audible pedestrian signals
- Avenue P & 21<sup>st</sup> Street
  - Improve street lighting
- Avenue W & 18<sup>th</sup> Street West
  - Activated pedestrian lights
- General
  - Lighting along DL Hamilton Park paths
  - Improve accessibility for people with disabilities
  - Longer walk times and shorter wait times



### 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:

- 18<sup>th</sup> Street
  - Yield signs at Avenues R, S and T do not work
- 20<sup>th</sup> Street
  - Vehicles are waiting a long time to turn onto 20<sup>th</sup> Street at signalized intersections
  - Pedestrians are waiting a long time to cross 20<sup>th</sup> Street at signalized intersections
- Avenue L & 21<sup>st</sup> Street
  - Difficult to access Station 20 West

The following solutions were proposed by residents:

- 18<sup>th</sup> Street
  - Speed bumps
- 20<sup>th</sup> Street
  - Flashing yellow light instead of a solid red light

## 2.4 Concern 4 – Parking

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

Concerns regarding parking were at the following locations:

- Avenue O
  - Street is too narrow
  - High parking demand in front of St. Mary’s Church
- Avenue P
  - Parking on east side of the 300 block obstructs sightlines
- Avenue P & 19<sup>th</sup> Street
  - Parking makes it difficult for cars turning onto Avenue P from 19<sup>th</sup> Street in either direction
- Columbian Place
  - Many people going to the hospital are parking in the cul-de-sac
- General
  - Vehicles are parking too close to intersections (Avenue O & 21<sup>st</sup> Street, near hospital, Avenue L & 20<sup>th</sup> Street)

The following solutions were proposed by residents:

- Avenue O
  - Install 2 hour parking on west side of Avenue O along St. Mary’s Church
- Avenue P
  - Post “No Parking” half a block on the east side south of 20<sup>th</sup> Street near 300 block
- Columbian Place
  - Install 2 hour parking restrictions

## 2.5 Concern 5 – Maintenance

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

The following concerns regarding maintenance were identified:

- Damaged sidewalks
- Icy roads at Avenue O & 21<sup>st</sup> Street
- Damaged ramps near hospital
- Damaged sign on median island at Avenue P & 21<sup>st</sup> Street
- Potholes along Avenue O
- Recycling bin locations

The following solutions were proposed by residents:

- Sidewalks and ramps need to be repaired
- Sanding needed at Avenue O & 21<sup>st</sup> Street

## 2.6 Concern 6 – Major Intersections & Corridors

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

Concerns regarding major intersections were identified at the following locations:

- General
  - Vehicles are waiting a long time at signalized intersections
  - Pedestrians are waiting a long time to cross at signalized intersections
  - Not enough buses

The following solutions were proposed by residents:

- General
  - Pedestrian countdown signals at more intersections
  - More buses (i.e. #10 – Pleasant Hill, #2 – Meadowgreen) for seniors, people with disabilities, etc.

## 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

Travel speeds were measured to determine the 85<sup>th</sup> percentile speed, which is the speed at which 85 percent of vehicles are travelling at or below. The speed limit in the Pleasant Hill 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)
17 <sup>th</sup> Street	Avenue Q to Avenue S	Local	90	40
19 <sup>th</sup> Street	Avenue Q to Avenue R		1,050	39
Avenue O	20 <sup>th</sup> Street to 21 <sup>st</sup> Street		700	32
Avenue V	20 <sup>th</sup> Street to 21 <sup>st</sup> Street		550	34
Avenue W	18 <sup>th</sup> Street to 19 <sup>th</sup> Street	Minor Arterial	3,200	48
20 <sup>th</sup> Street	Avenue N to Avenue O		8,900	School - 45 Regular - 54
	Avenue Q to Avenue R		7,550	49
	Avenue S to Avenue T	6,150	53	

### 3.3 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 3-3**.

**Table 3-3: Pedestrian Assessments**

Location	Number of Pedestrians Crossing During Peak Hours	Result
20 <sup>th</sup> Street & Avenue N	14	Pedestrian Device Not Warranted
Avenue W & 18 <sup>th</sup> Street	124	

A pedestrian device was warranted at Avenue W & 18<sup>th</sup> Street based on a count completed in August 2015 but was not warranted based on a count completed in June 2017. This intersection will be monitored and a count will be completed in spring 2018.

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

### 3.4 Traffic Signal Assessment

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 3-4**.

**Table 3-4: Traffic Signal Assessment**

Location	Traffic Signal Warrant Points	Results
20 <sup>th</sup> Street & Avenue S	19	Traffic Signal Not Warranted

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

### 3.5 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:

- 17<sup>th</sup> Street & Avenue W
- 18<sup>th</sup> Street & Avenue W
- 19<sup>th</sup> Street & Avenue P
- 19<sup>th</sup> Street & Avenue R
- 19<sup>th</sup> Street & Avenue W
- 20<sup>th</sup> Street & Avenue N
- 20<sup>th</sup> Street & Avenue O
- 20<sup>th</sup> Street & Avenue P
- 20<sup>th</sup> Street & Avenue Q
- 20<sup>th</sup> Street & Avenue R
- 20<sup>th</sup> Street & Avenue S
- 20<sup>th</sup> Street & Avenue W
- 20<sup>th</sup> Street (Avenue N to Avenue O)
- 20<sup>th</sup> Street (Avenue O to Avenue P)
- 20<sup>th</sup> Street (Avenue P to Avenue Q)
- 20<sup>th</sup> Street (Avenue Q to Avenue R)
- 20<sup>th</sup> Street (Avenue T to Avenue U)
- 20<sup>th</sup> Street (Avenue U to Avenue V)
- 21<sup>st</sup> Street & Avenue P
- 21<sup>st</sup> Street & Avenue R
- 21<sup>st</sup> Street & Avenue S
- 21<sup>st</sup> Street & Avenue W
- Avenue N (19<sup>th</sup> Street to 20<sup>th</sup> Street)
- Avenue O (20<sup>th</sup> Street to 21<sup>st</sup> Street)
- Avenue P (19<sup>th</sup> Street to 20<sup>th</sup> Street)
- Avenue P (20<sup>th</sup> Street to 21<sup>st</sup> Street)
- Avenue P (21<sup>st</sup> Street to 22<sup>nd</sup> Street)
- Avenue Q (19<sup>th</sup> Street to 20<sup>th</sup> Street)
- Avenue Q (21<sup>st</sup> Street to 22<sup>nd</sup> Street)
- Avenue R (19<sup>th</sup> Street to 20<sup>th</sup> Street)
- Avenue S (19<sup>th</sup> Street to 20<sup>th</sup> Street)



- Avenue T (21<sup>st</sup> Street to 22<sup>nd</sup> Street)
- Avenue W (19<sup>th</sup> Street to 20<sup>th</sup> Street)
- Avenue W (21<sup>st</sup> Street to 22<sup>nd</sup> Street)

In this case, higher trends are noted along 20<sup>th</sup> Street, which is expected as it is an arterial roadway with high traffic volumes. Details of the collision analysis are provided in **Appendix E**.

## 4 STAGE 3: PRESENTATION OF TRAFFIC PLAN

### 4.1 Methodology

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

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

The tables in the following sections provide the details of the recommended Traffic 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
20 <sup>th</sup> Street (Avenue T and Avenue U)	Install speed display board facing eastbound traffic	Reduce speed
20 <sup>th</sup> Street (Avenue O and Avenue P)	Install School Ahead warning sign for eastbound traffic	Improve visibility of school zone signs; Reduce speed
20 <sup>th</sup> Street & Avenue O / Columbian Place	Relocate overhead School Ahead warning sign closer to traffic signal head	
20 <sup>th</sup> Street & Avenue M	Relocate overhead School Ahead warning sign closer to traffic signal head	
20 <sup>th</sup> Street (Avenue L and Avenue M)	Install School Ahead warning sign for westbound traffic	
Avenue W (17 <sup>th</sup> Street and Appleby Drive)	Speed assessment in spring 2018	Determine if improvements are needed

### 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
20 <sup>th</sup> Street & Avenue S	Install Pedestrians Prohibited / Allowed / Arrow sign for northbound & southbound pedestrians on east leg	Improve pedestrian crossing compliance
	Install zebra crosswalks on west and north legs	Improve pedestrian safety
20 <sup>th</sup> Street & Avenue O / Columbian Place	Install zebra crosswalk on west leg	Improve pedestrian safety
	Modify pedestrian signal timing	Reduce pedestrian waiting time
20 <sup>th</sup> Street & Avenue N	Install zebra crosswalk on west leg	Improve pedestrian safety
20 <sup>th</sup> Street & Avenue M	Install zebra crosswalk on east leg	Improve pedestrian safety
18 <sup>th</sup> Street & Avenue W	Traffic count in spring 2018	Determine if pedestrian improvements are needed

## 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
20 <sup>th</sup> Street west of Avenue R	Remove Right Lane Ends warning sign on north side of 20 <sup>th</sup> Street for westbound traffic	Improve driver expectancy
20 <sup>th</sup> Street east of Avenue T	Install Right Turn Only Lane sign for westbound traffic	
21 <sup>st</sup> Street & Avenue M	Traffic count in spring 2018	Determine if improvements are needed
18 <sup>th</sup> Street & Avenue Q	Remove Road Narrows warning sign; 20 kph Advisory Speed warning sign; Install stop sign for northbound traffic	Improve safety
17 <sup>th</sup> Street & Back Lane south of 18 <sup>th</sup> Street	Install One-Way signs for southbound traffic; Install Curve warning sign; 20 kph Advisory Speed warning sign for southbound traffic	Improve safety
17 <sup>th</sup> Street & Avenue S	Remove Road Narrows warning sign; 20 kph Advisory Speed warning sign; Install Entry Prohibited sign for eastbound traffic	Improve safety

## 4.5 Parking

The recommendations for parking are listed in **Table 4-4**.

**Table 4-4: Recommended Improvements – Parking**

Location	Recommendation	Justification
20 <sup>th</sup> Street & Avenue R	Install a “No Parking” signs on south side of 20 <sup>th</sup> Street 15 metres west of Avenue R	Improve visibility / sightlines
Avenue O (20 <sup>th</sup> Street and 21 <sup>st</sup> Street)	Install “2 Hour Parking” signs on west side of Avenue O	Promote parking turnover
Avenue P & Affinity Credit Union Driveway	Install “2 Hour Parking” sign on east side of Avenue P north of Affinity Credit Union driveway	Promote parking turnover
	Install “No Parking” signs on east side of Avenue P six metres from each side of Affinity Credit Union driveway	Improve visibility / sightlines

## 4.6 Follow Up Consultation – Presentation of Traffic Plan

The recommended improvements were presented to residents and stakeholders at a follow-up public meeting on September 26, 2017. Meeting minutes are provided in **Appendix F**. Recommended improvements that were not supported were eliminated or altered accordingly.

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

The revised list of recommendations was then circulated to the civic divisions (including Saskatoon Police Service, Saskatoon Light & Power, Saskatoon Fire Department, Parking Services, Roadways & Operations and Transit) to gather comments and concerns. General support 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 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 Pleasant Hill 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 Cost Estimate
- **Table 5-2:** Speed Display Board Cost Estimate
- **Table 5-3:** Additional Traffic Counts Cost Estimate
- **Table 5-4:** Total Cost Estimate

**Table 5-1: Signs & Pavement Markings Cost Estimate**

Location	Device (# of Devices)	Cost Estimate	Time Frame
20 <sup>th</sup> Street east of Avenue T	Right Turn Only Lane sign (1)	\$250	1 to 2 years
20 <sup>th</sup> Street & Avenue S	Pedestrians Prohibited / Allowed / Arrow sign (2)	\$500	
	Zebra crosswalk (2)	\$500	
20 <sup>th</sup> Street & Avenue R	"No Parking" sign (1)	\$250	
20 <sup>th</sup> Street (Avenue O and Avenue P)	School Ahead warning sign (1)	\$250	
Avenue O (20 <sup>th</sup> Street and 21 <sup>st</sup> Street)	"2 Hour Parking" sign (3)	\$750	
20 <sup>th</sup> Street & Avenue O / Columbian Place	Zebra crosswalk (1)	\$250	
20 <sup>th</sup> Street & Avenue N	Zebra crosswalk (1)	\$250	
20 <sup>th</sup> Street & Avenue M	Zebra crosswalk (1)	\$250	
20 <sup>th</sup> Street (Avenue L and Avenue M)	School Ahead warning sign (1)	\$250	
Avenue P & Affinity Credit Union Driveway	"2 Hour Parking" sign (2)	\$500	
	"No Parking" sign (2)	\$500	
18 <sup>th</sup> Street & Avenue Q	Stop sign (1)	\$250	
17 <sup>th</sup> Street & Back Lane south of 18 <sup>th</sup> Street	One-Way sign (2)	\$500	
	Curve warning sign (1)	\$250	
	20 kph Advisory Speed warning sign (1)	\$250	
17 <sup>th</sup> Street & Avenue S	Do Not Enter sign (2)	\$500	
<b>Total</b>		<b>\$6,250</b>	

**Table 5-2: Speed Display Board Cost Estimate**

Location	Device (# of Devices)	Cost Estimate	Time Frame
20 <sup>th</sup> Street (Avenue T and Avenue U)	Speed display board (1)	\$0 (funded through Speed Program)	1 to 2 years
<b>Total</b>		<b>\$0</b>	

**Table 5-3: Additional Traffic Counts Cost Estimate**

Location	Device	Cost Estimate	Time Frame
21 <sup>st</sup> Street & Avenue M	Peak Hour Turning Movement Count	\$200	1 to 2 years
18 <sup>th</sup> Street & Avenue W	Peak Hour Turning Movement Count	\$200	
Avenue W (17 <sup>th</sup> Street and Appleby Drive)	Speed Study	\$0	
<b>Total</b>		<b>\$400</b>	



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

Category	Time Frame
	Short-Term (1 to 2 years)
Signs & Pavement Markings	\$6,250
Speed Display Board	\$0
Additional Traffic Counts	\$400
<b>Total</b>	<b>\$6,650</b>

The total cost estimate for short-term improvements (signs, pavement markings, and speed display board) is **\$6,650**.

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

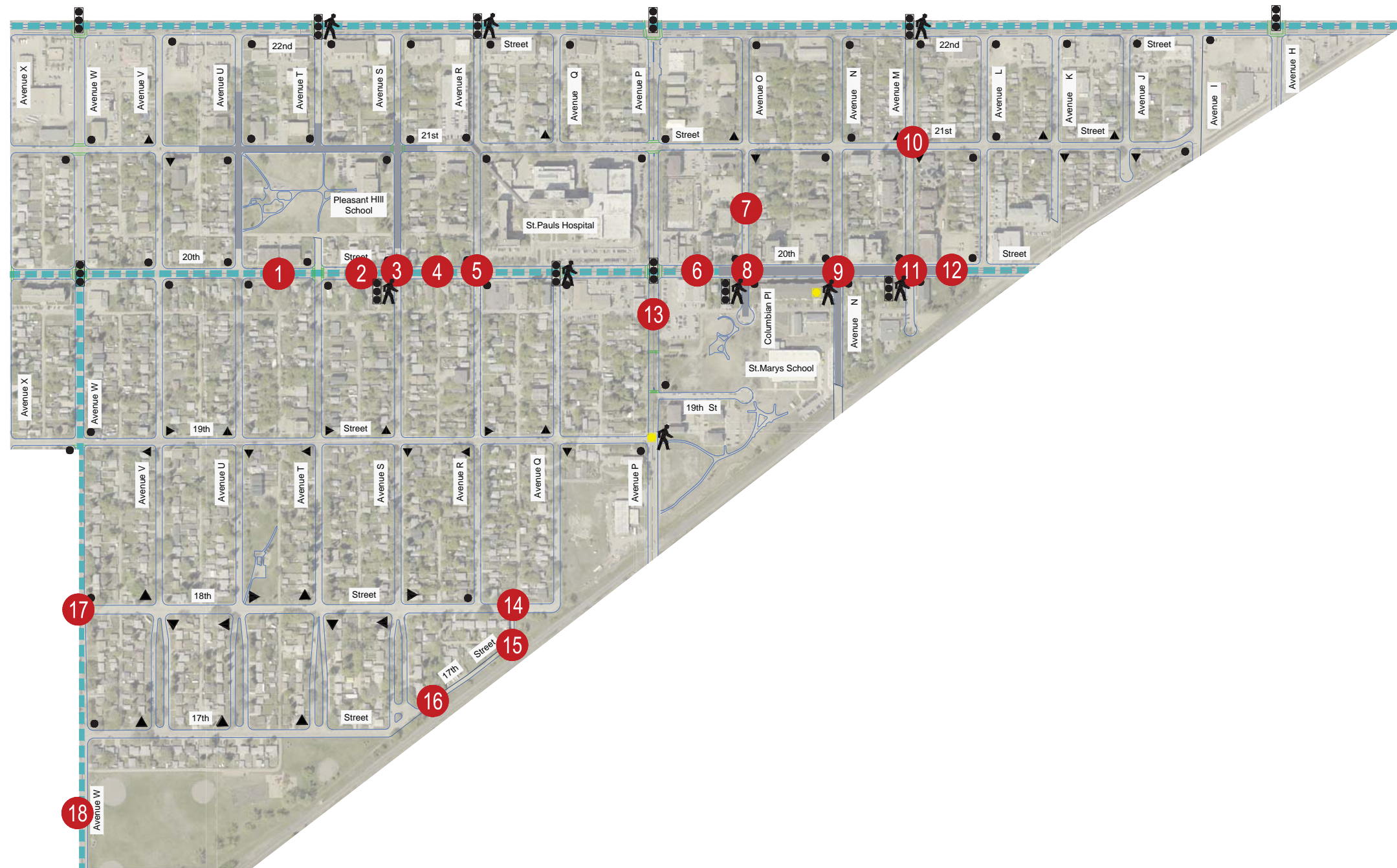
The recommended Pleasant Hill Neighbourhood Traffic Plan is illustrated in **Exhibit 5-1**.

**Table 5-5: Pleasant Hill Neighbourhood Recommended Improvements**

Item	Location	Recommendation	Justification	Implementation Schedule
1	20 <sup>th</sup> Street (Avenue T and Avenue U)	Install speed display board facing eastbound traffic	Reduce speed	1 to 2 years
2	20 <sup>th</sup> Street east of Avenue T	Install Right Turn Only Lane sign for westbound traffic	Improve driver expectancy	
3	20 <sup>th</sup> Street & Avenue S	Install Pedestrians Prohibited / Allowed / Arrow signs for northbound & southbound pedestrians on east leg	Improve pedestrian crossing compliance	
		Install zebra crosswalks on west and north legs	Improve pedestrian safety	
4	20 <sup>th</sup> Street west of Avenue R	Remove Right Lane Ends warning sign on north side of 20th Street for westbound traffic	Improve driver expectancy	
5	20 <sup>th</sup> Street & Avenue R	Install a "No Parking" sign on south side of 20th Street 15 metres west of Avenue R	Improve visibility / sightlines	
6	20 <sup>th</sup> Street (Avenue O and Avenue P)	Install School Ahead warning sign for eastbound traffic	Improve visibility of school zone signs; Reduce speed	
7	Avenue O (20 <sup>th</sup> Street and 21 <sup>st</sup> Street)	Install "2 Hour Parking" signs on west side of Avenue O	Promote parking turnover	
8	20 <sup>th</sup> Street & Avenue O / Columbian Place	Relocate overhead School Ahead warning sign closer to traffic signal head	Improve visibility of school zone signs; Reduce speed	
		Install zebra crosswalk on west leg	Improve pedestrian safety	
		Modify pedestrian signal timing	Reduce pedestrian waiting time	
9	20 <sup>th</sup> Street & Avenue N	Install zebra crosswalk on west leg	Improve pedestrian safety	
10	21 <sup>st</sup> Street & Avenue M	Traffic count in spring 2018	Determine if improvements are needed	
11	20 <sup>th</sup> Street & Avenue M	Relocate overhead School Ahead warning sign closer to traffic signal head	Improve visibility of school zone signs; Reduce speed	
		Install zebra crosswalk on east leg	Improve pedestrian safety	
12	20 <sup>th</sup> Street (Avenue L and Avenue M)	Install School Ahead warning sign for westbound traffic	Improve visibility of school zone signs; Reduce speed	

**Table 5-5 Continued**

<b>Item</b>	<b>Location</b>	<b>Recommendation</b>	<b>Justification</b>	<b>Implementation Schedule</b>
13	Avenue P & Affinity Credit Union Driveway	Install "2 Hour Parking" signs on east side of Avenue P north of Affinity Credit Union driveway	Promote parking turnover	1 to 2 years
		Install "No Parking" signs on east side of Avenue P six metres from each side of Affinity Credit Union driveway	Improve visibility / sightlines	
14	18 <sup>th</sup> Street & Avenue Q	Remove Road Narrows warning sign and 20 kph Advisory Speed warning sign; Install "Local Traffic Only" warning sign for southbound traffic; Install stop sign for northbound traffic	Improve safety	
15	17 <sup>th</sup> Street & Back Lane south of 18 <sup>th</sup> Street	Install One-Way signs for southbound traffic; Install Curve warning sign and 20 kph Advisory Speed warning sign for southbound traffic	Improve pedestrian safety	
16	17 <sup>th</sup> Street & Avenue S	Remove Road Narrows warning sign and 20 kph Advisory Speed warning sign; Install Entry Prohibited sign for eastbound traffic	Improve driver expectancy	
17	18 <sup>th</sup> Street & Avenue W	Traffic count in spring 2018	Determine if pedestrian improvements are needed	
18	Avenue W (17 <sup>th</sup> Street and Appleby Drive)	Speed assessment in spring 2018	Determine if improvements are needed	



**LEGEND**

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

Exhibit 5-1

# PLEASANT HILL TRAFFIC PLAN



APPENDIX A: PUBLIC MEETING #1 – APRIL 13, 2017 MINUTES

## APPENDIX B: TRAFFIC DATA COLLECTION MAP

## APPENDIX C: PEDESTRIAN DEVICE ASSESSMENTS

## APPENDIX D: TRAFFIC SIGNAL ASSESSMENT



## APPENDIX E: COLLISION ANALYSIS

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

## APPENDIX G: DECISION MATRIX

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