

# PLEASANT HILL

## 2017 NEIGHBOURHOOD TRAFFIC REVIEWS



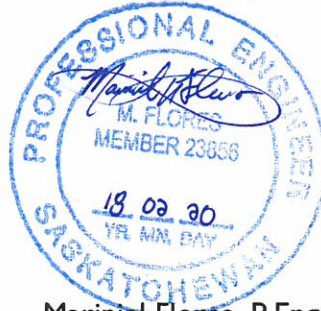
City of Saskatoon  
February 8, 2018

# Pleasant Hill Neighbourhood Traffic Review

February 12, 2018

Authorization

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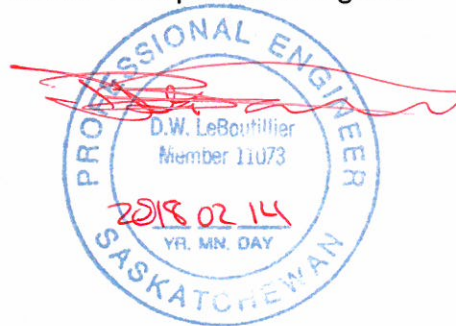
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- City of Saskatoon Community Standards
- City of Saskatoon Transportation
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*Cover Photograph Matt Ramage*

## 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;<br>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;<br>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;<br>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;<br>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





## EXECUTIVE SUMMARY

|     |  |    |
|-----|--|----|
| 1   | Introduction .....   | 1  |
| 2   | Stage 1: Identifying Issues, Concerns, and Possible Solutions..... | 2  |
| 2.1 | Concern 1 – Speeding and Shortcutting.....                         | 2  |
| 2.2 | Concern 2 – Pedestrian Safety.....                                 | 4  |
| 2.3 | Concern 3 – Traffic Control .....                                  | 6  |
| 2.4 | Concern 4 – Parking.....   | 7  |
| 2.5 | Concern 5 – Maintenance.....                                       | 8  |
| 2.6 | Concern 6 – Major Intersections & Corridors.....                   | 8  |
| 3   | Stage 2: Development of Draft Traffic Plan.....                    | 9  |
| 3.1 | Methodology .....  | 9  |
| 3.2 | Traffic Volume and Speed Assessments.....                          | 9  |
| 3.3 | Pedestrian Assessments.....  | 11 |
| 3.4 | Traffic Signal Assessment .....                                    | 12 |
| 3.5 | Collision Analysis .....   | 13 |
| 4   | Stage 3: Presentation of Traffic Plan.....                         | 15 |
| 4.1 | Methodology .....  | 15 |
| 4.2 | Speeding and Shortcutting.....                                     | 15 |
| 4.3 | Pedestrian Safety .....  | 16 |
| 4.4 | Intersection Safety .....  | 17 |
| 4.5 | Parking.....   | 17 |
| 4.6 | Follow Up Consultation – Presentation of Traffic Plan.....         | 18 |
| 5   | Stage 4: Implementation.....                                       | 19 |

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

## LIST OF TABLES

|  |    |
|--|----|
| Table 3-1: City of Saskatoon Street Classifications and Characteristics..... | 10 |
| Table 3-2: Speed Studies and Average Daily Traffic Counts (2017) .....       | 11 |
| Table 3-3: Pedestrian Assessments.....                                       | 12 |
| Table 3-4: Traffic Signal Assessment .....                                   | 12 |
| Table 4-1: Recommended Improvements – Speeding and Shortcutting .....        | 15 |
| Table 4-2: Recommended Improvements – Pedestrian Safety.....                 | 16 |
| Table 4-3: Recommended Improvements – Intersection Safety.....               | 17 |
| Table 4-4: Recommended Improvements – Parking.....                           | 17 |
| Table 5-1: Signs & Pavement Markings Cost Estimate .....                     | 20 |
| Table 5-2: Speed Display Board Cost Estimate .....                           | 21 |
| Table 5-3: Additional Traffic Counts Cost Estimate.....                      | 21 |
| Table 5-4: Total Cost Estimate.....  | 22 |
| Table 5-5: Pleasant Hill Neighbourhood Recommended Improvements.....         | 23 |

## LIST OF EXHIBITS

|  |    |
|--|----|
| Exhibit 5-1: Recommended Pleasant Hill Traffic Plan..... | 25 |
|--|----|

## 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<br>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**.

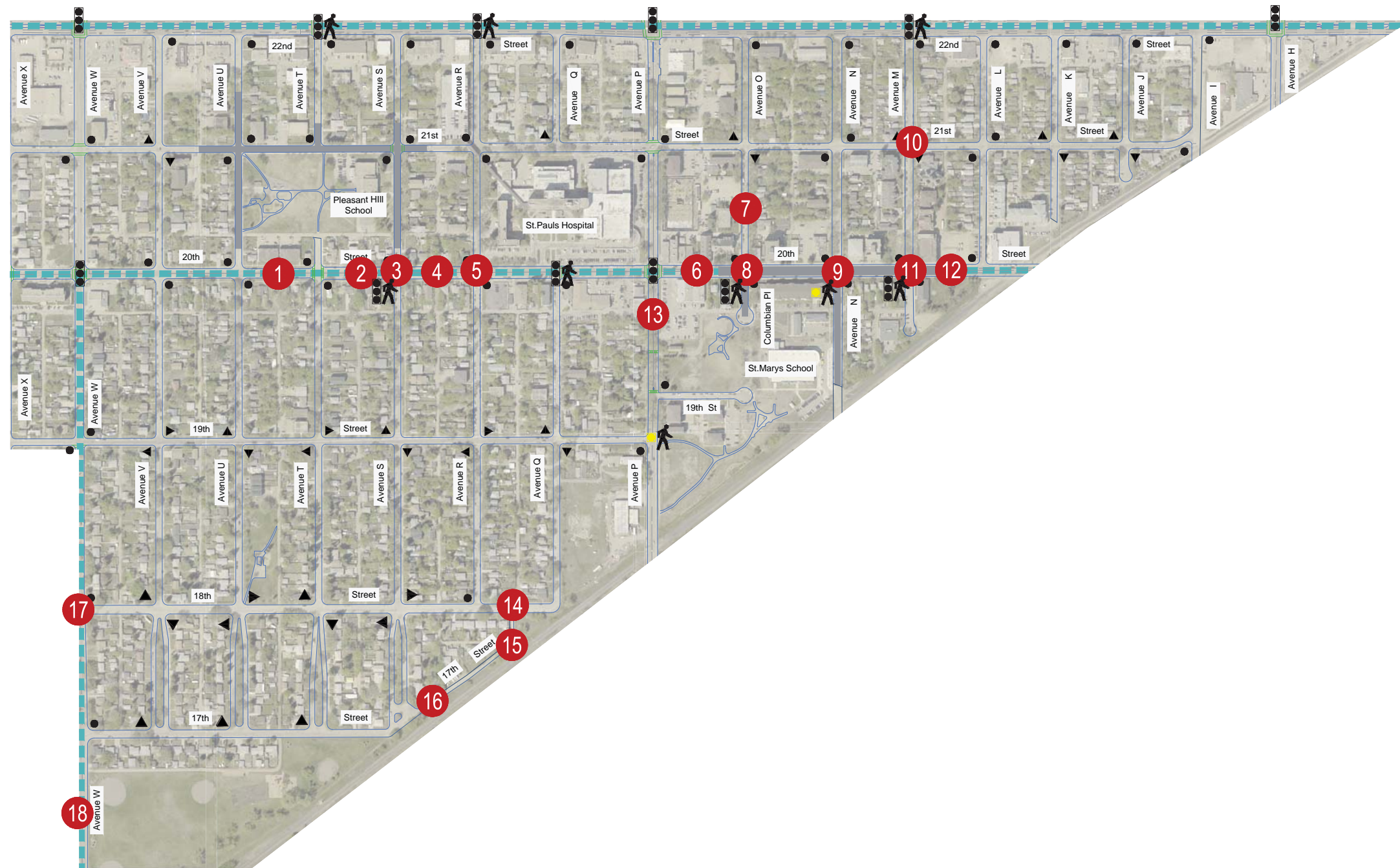
**Table 5-5: Pleasant Hill Neighbourhood Recommended Improvements**

| 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;<br>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;<br>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;<br>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;<br>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

**Pleasant Hill Neighbourhood Traffic Review**  
**Thursday, April 13, 2017, 7:00 PM – 9:00 PM**  
**Station 20 West (206 1120 20<sup>th</sup> Street West)**

**Agenda**

1. Welcome & Introductions
2. Having a Productive Discussion
3. Traffic Management Presentation
4. Traffic Issue Discussion – Your Ideas/Solutions
5. Next Steps
6. Questions & Answers

**1. Welcome & Introductions**

(Presented by Mitch Riabko and Kathy Dahl, Facilitators)

- Councillor Hilary Gough opening remarks

**2. Having a Productive Discussion**

(Presented by Mitch Riabko and Kathy Dahl, Facilitators)

- A Chance to Listen to Others and Share Your Ideas
- Respectful
- Orderly Participation
- Limit Repetitive Discussion

**3. Traffic Management Presentation – Pleasant Hill Neighbourhood Traffic Review**

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

- Presentation Outline
  - Neighbourhood Traffic Review Process
  - Pleasant Hill 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, improve pedestrian crossings & intersections where necessary
  - 2014 – Reviewed 11 neighbourhoods
  - 2015 – Reviewed 8 neighbourhoods
  - 2016 – Reviewed 8 neighbourhoods
  - 2017 – Pleasant Hill, North Park / Richmond Heights, Silverwood Heights, Dundonald, Buena Vista / Exhibition / Queen Elizabeth, Wildwood, Erindale / Arbor Creek

- Pleasant Hill Review Schedule
  - Stage 1 – Identify issues & possible solutions through community consultation (April 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– 17<sup>th</sup> St, 19<sup>th</sup> St, Ave O S, Ave V S, St. Mary's School Back Lane
  - Pedestrian Safety – Ave W & 18<sup>th</sup> St W
  
- 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

#### **4. Traffic Issue Discussion**

- Residents discussed traffic concerns in Pleasant Hill and potential solutions
- Ave P & 20<sup>th</sup> St
  - People seem to respect “Walk” more. Suggest “Don’t Walk” instead of a hand symbol or suggest audible signals.
  - Pedestrian Actuated Signal not being used. Suggest an active beacon.
  - Wait time too long. Shorten call time.
  - Driver expectancy in the westbound direction.
  - Improve crossing for cyclists with trailer and for wheelchairs.
- 20<sup>th</sup> St
  - School zone sign not evident. Suggest sign board.
  - Ramps/corners in poor condition near the hospital
  - Suggest reduced speed zone near the hospital
  - People are parking too close to intersections near the hospital
- Ave P & 21<sup>st</sup> St
  - Sign on existing median island keeps getting driven over. Street too dark.
- Ave P
  - School zone sign is missing or not visible northbound towards 20<sup>th</sup> Street
- 18<sup>th</sup> St & Ave W
  - Concerned about pedestrians, specifically children crossing Ave W
- Ave L & 20<sup>th</sup> St
  - Parking too close to intersections
  - Hard to access Station 20 West
- 17<sup>th</sup> St
  - Speeding between Ave R and Ave P
- 19<sup>th</sup> St
  - Speeding between Ave R and Ave P
- Ave R & 20<sup>th</sup> St
  - Is there a pedestrian crossing?
- 21<sup>st</sup> St & Ave W
  - Senior issues
- 22<sup>nd</sup> St
  - Issues with crossing at t-intersections
- W.P. Bates
  - Issues with parent drop-offs at the school. Suggest a drop-off loop in front of school.
- Ave O
  - Street is narrow. Lots of traffic. Remove parking on west side of Ave O along St. Mary’s property.
  - Potholes
- Columbian Pl
  - Many people going to hospital are parking in the cul-de-sac. 2 hour parking may need to be installed.
- 20<sup>th</sup> St & Columbian Pl

- People don't press the push-button to activate the Pedestrian Actuated Signal
- General
  - Improve accessibility for people with disabilities
  - Generally unsafe for pedestrians at crossings and ramps
  - Left-turning vehicles swerving around at intersections
  - Pedestrian crossing signals need audible signals. Put more on 20<sup>th</sup> Street at Ave O and at Ave N.
  - Longer walk times and shorter wait times

## **5. 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 May 12, 2017
3. Additional public input via City on-line Community Engagement webpage no later than May 12, 2017 at <http://shapingsaskatoon.ca/discussions/pleasant-hill-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

## **6. Questions & Answers**

- When will the meeting minutes be posted?
  - The meeting minutes will be posted in a week or so.
- Councillor Hilary Gough closing remarks

## **List of Representatives**

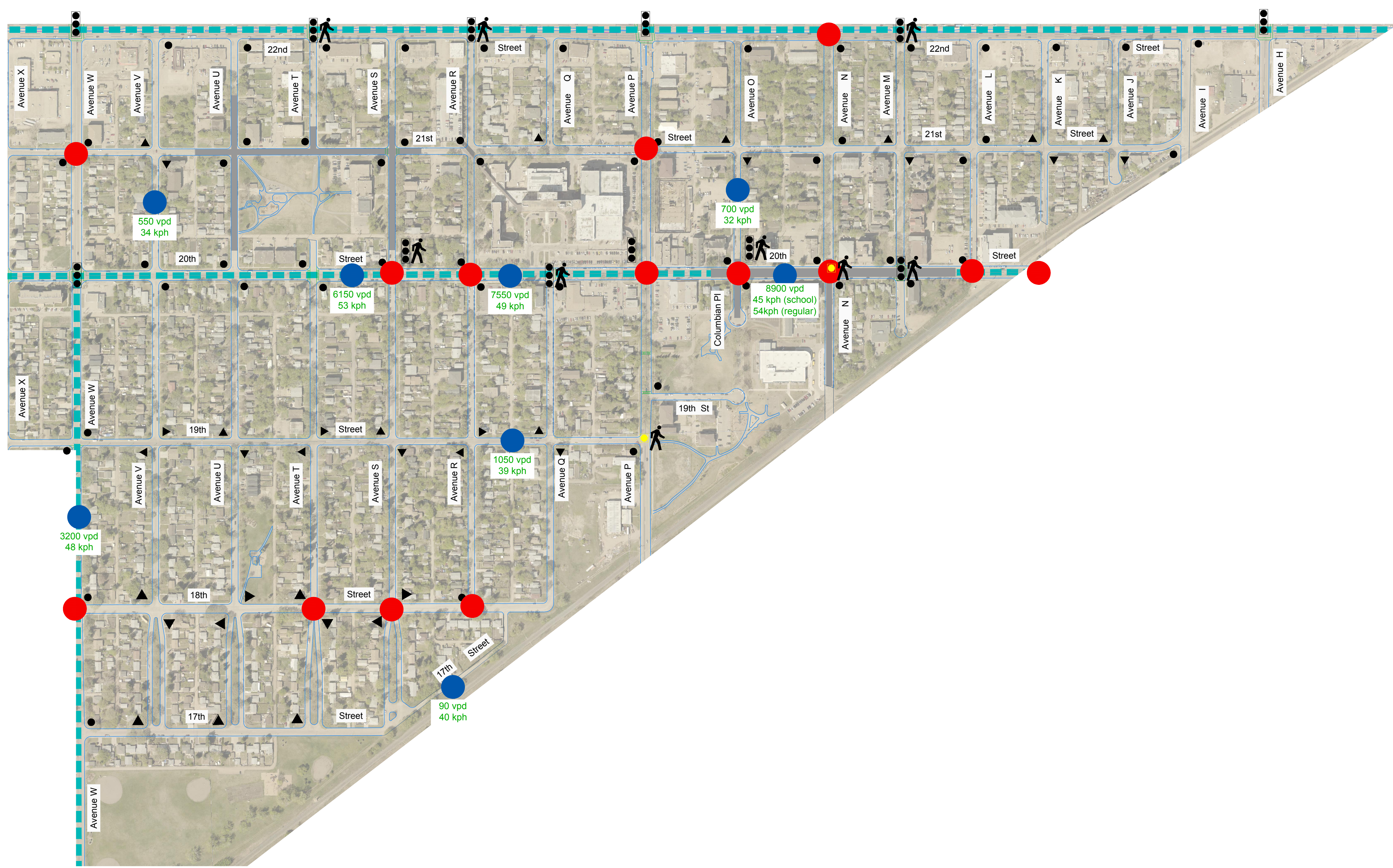
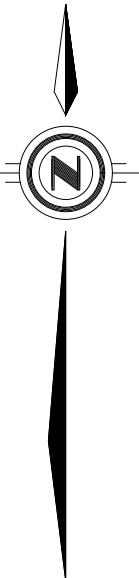
- Kathy Dahl, Mitch Riabko – Great Works Consulting, Facilitators
- Mariniel Flores – City of Saskatoon, Transportation & Utilities, P.Eng., Transportation Engineer
- Goran Lazic – City of Saskatoon, Transportation & Utilities, P.Eng., Transportation Engineer
- Yang Li – City of Saskatoon, Transportation & Utilities, Engineer-in-Training, Transportation Engineer
- Marina Melchiorre – City of Saskatoon, Transportation & Utilities, P.Eng., Transportation Engineer

Councillor Hilary Gough attended the meeting – City of Saskatoon Ward 2 Councillor



## 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
- ⋮ EXISTING 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

# PLEASANT HILL TRAFFIC DATA COLLECTION MAP





## APPENDIX C: PEDESTRIAN DEVICE ASSESSMENTS

**20th Street & Avenue N**

**Pedestrian Corridor Warrant**

| Time<br>(15 minute<br>intervals) | Vehicle Counts |         | Pedestrian Counts |      |       |                      |                 |         | P.C.<br>Warrant<br>Points | Periods<br>Wrnt'd<br>(1=Yes) | Points of<br>Wrnt'd<br>Periods |
|----------------------------------|----------------|---------|-------------------|------|-------|----------------------|-----------------|---------|---------------------------|------------------------------|--------------------------------|
|                                  |                |         | Total Both Sides  |      |       |                      | Factored Counts |         |                           |                              |                                |
|                                  | 15 min.        | 30 min. | Child             | Teen | Adult | Senior /<br>Impaired | Total           | 15 min. | 30 min.                   |                              |                                |
| 7:00                             |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 7:15                             |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 7:30                             |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 7:45                             |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 8:00                             | 441            | 441     |                   |      |       |                      |                 |         |                           |                              |                                |
| 8:15                             | 520            | 961     | 2                 |      |       |                      | 2               | 2       | 2                         | 1,922                        |                                |
| 8:30                             | 496            | 1,016   |                   |      |       |                      |                 |         | 2                         | 2,032                        |                                |
| 8:45                             | 558            | 1,054   | 1                 |      |       |                      | 1               | 1       | 1                         | 1,054                        |                                |
| 9:00                             |                | 558     |                   |      |       |                      |                 |         | 1                         | 558                          |                                |
| 9:15                             |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 9:30                             |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 9:45                             |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| <b>AM Totals</b>                 | <b>2,015</b>   |         | <b>3</b>          |      |       |                      | <b>3</b>        |         |                           |                              |                                |
| 11:30                            | 531            |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 11:45                            | 529            | 1,060   |                   |      |       |                      |                 |         |                           |                              |                                |
| 12:00                            | 576            | 1,105   | 1                 |      |       |                      | 1               | 1       | 1                         | 1,105                        |                                |
| 12:15                            | 589            | 1,165   | 1                 |      |       |                      | 1               | 1       | 2                         | 2,330                        |                                |
| 12:30                            | 569            | 1,158   | 2                 |      |       |                      | 2               | 2       | 3                         | 3,474                        |                                |
| 12:45                            | 542            | 1,111   | 2                 |      |       |                      | 2               | 2       | 4                         | 4,444                        |                                |
| 13:00                            | 524            | 1,066   | 1                 |      |       |                      | 1               | 1       | 3                         | 3,198                        |                                |
| 13:15                            | 538            | 1,062   |                   |      |       |                      |                 |         | 1                         | 1,062                        |                                |
| <b>Noon Totals</b>               | <b>4,398</b>   |         | <b>7</b>          |      |       |                      | <b>7</b>        |         |                           |                              |                                |
| 14:00                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 14:15                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 14:30                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 14:45                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 15:00                            | 600            | 600     | 2                 |      |       |                      | 2               | 2       | 2                         | 1,200                        |                                |
| 15:15                            | 597            | 1,197   |                   |      |       |                      |                 |         | 2                         | 2,394                        |                                |
| 15:30                            | 668            | 1,265   |                   |      |       |                      |                 |         |                           |                              |                                |
| 15:45                            | 608            | 1,276   |                   |      |       |                      |                 |         |                           |                              |                                |
| 16:00                            | 690            | 1,298   |                   |      |       |                      |                 |         |                           |                              |                                |
| 16:15                            | 669            | 1,359   |                   |      |       |                      |                 |         |                           |                              |                                |
| 16:30                            | 770            | 1,439   | 2                 |      |       |                      | 2               | 2       | 2                         | 2,878                        |                                |
| 16:45                            | 722            | 1,492   |                   |      |       |                      |                 |         | 2                         | 2,984                        |                                |
| 17:00                            |                | 722     |                   |      |       |                      |                 |         |                           |                              |                                |
| 17:15                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 17:30                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 17:45                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 18:00                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 18:15                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 18:30                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 18:45                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 19:00                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 19:15                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 19:30                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 19:45                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 20:00                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 20:15                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 20:30                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| 20:45                            |                |         |                   |      |       |                      |                 |         |                           |                              |                                |
| <b>PM Totals</b>                 | <b>5,324</b>   |         | <b>4</b>          |      |       |                      | <b>4</b>        |         |                           |                              |                                |
| <b>Totals</b>                    | <b>11,737</b>  |         | <b>14</b>         |      |       |                      | <b>14</b>       |         |                           |                              |                                |

|                  |  |      |
|------------------|--|------|
| 100%             |  | 100% |
| West Crosswalk = |  | 6    |
| East Crosswalk = |  | 8    |

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

**SUMMARY**

Total Warranted PC Points:                      or                      / period  
 Highest PC point value:    4,444                      at  
 Average PC point value:    2,042  
 No. of periods warranted:

**20th Street & Avenue N**

**Pedestrian Actuated Signal Warrant**

Prepared By: Mariniel Flores Date: Tuesday, September 12, 2017

Location & Roadway Classification: 20th St W (Minor Arterial) & Ave N S (Local)  
 Date of Count: Day of wk: Wednesday Mth, Day, Yr: Wednesday, June 21, 2017  
 Weather: 15.0°C  
 Traffic Control Devices: Two-way stop signs on Ave N S  
 Current Pedestrian Control: Active Pedestrian Corridor on 20th St W  
 Other Notes: \_\_\_\_\_

Number of travel lanes passing through the crosswalk(s) 4 lanes  
 Is there a physical median in this crosswalk(s)? n (y or n)  
 Speed limit (or 85th percentile speed) 30 km/h  
 85th percentile (check one)  
 Posted Limit  
 Distance to nearest protected crosswalk 100 m  
 Location: 20th St W & Ave M S  
 Type: Pedestrian Actuated Signal, standard crosswalks  
 Is the orientation of this crosswalk(s) N-S? y (y or n)  
 Duration of pedestrian count 5 hrs

Elementary: **14** Total Warranted PC Points: \_\_\_\_\_ or \_\_\_\_\_ / period  
 High School: \_\_\_\_\_ Highest PC point value: **4,444** at \_\_\_\_\_  
 Adult: \_\_\_\_\_ Active Ped Corridor Points: \_\_\_\_\_  
 Senior: \_\_\_\_\_ Pedestrian Actuated Signal Points: **33**  
 Vehicles passing through crosswalk(s): **11,737**

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

**\*\*Install device at the East Crosswalk \*\***  
 (Note: Standard and Zebra crosswalks can be installed on both sides if pedestrian volumes are approximately equal.)

| Time (15 minute intervals) | Vehicle Counts |              |           |              | Pedestrian Counts         |      |       |                   |                           |       |      |       |          |
|----------------------------|----------------|--------------|-----------|--------------|---------------------------|------|-------|-------------------|---------------------------|-------|------|-------|----------|
|                            | SB             | WB           | NB        | EB           | West Crosswalk            |      |       | East Crosswalk    |                           |       |      |       |          |
|                            |                |              |           |              | Child                     | Teen | Adult | Senior / Impaired | Senior / Impaired         | Adult | Teen | Child |          |
| 7:00                       |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 7:15                       |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 7:30                       |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 7:45                       |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 8:00                       |                | 136          | 3         | 302          |                           |      |       |                   |                           |       |      |       |          |
| 8:15                       | 2              | 173          | 4         | 341          | 1                         |      |       |                   |                           |       |      |       | 1        |
| 8:30                       | 1              | 201          | 4         | 290          |                           |      |       |                   |                           |       |      |       |          |
| 8:45                       |                | 181          | 2         | 375          | 1                         |      |       |                   |                           |       |      |       |          |
| 9:00                       |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 9:15                       |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 9:30                       |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 9:45                       |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| <b>AM Totals</b>           | <b>3</b>       | <b>691</b>   | <b>13</b> | <b>1,308</b> | <b>2</b>                  |      |       |                   |                           |       |      |       | <b>1</b> |
| 11:30                      | 2              | 252          | 9         | 268          |                           |      |       |                   |                           |       |      |       |          |
| 11:45                      | 1              | 270          |           | 258          |                           |      |       |                   |                           |       |      |       |          |
| 12:00                      | 1              | 290          | 2         | 283          | 1                         |      |       |                   |                           |       |      |       |          |
| 12:15                      | 1              | 296          | 8         | 284          | 1                         |      |       |                   |                           |       |      |       |          |
| 12:30                      | 3              | 254          | 3         | 309          |                           |      |       |                   |                           |       |      |       | 2        |
| 12:45                      |                | 239          | 5         | 298          | 1                         |      |       |                   |                           |       |      |       | 1        |
| 13:00                      | 1              | 245          | 4         | 274          |                           |      |       |                   |                           |       |      |       | 1        |
| 13:15                      |                | 265          | 5         | 268          |                           |      |       |                   |                           |       |      |       |          |
| <b>Noon Totals</b>         | <b>9</b>       | <b>2,111</b> | <b>36</b> | <b>2,242</b> | <b>3</b>                  |      |       |                   |                           |       |      |       | <b>4</b> |
| 14:00                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 14:15                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 14:30                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 14:45                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 15:00                      | 3              | 313          | 6         | 278          |                           |      |       |                   |                           |       |      |       | 2        |
| 15:15                      | 1              | 304          | 9         | 283          |                           |      |       |                   |                           |       |      |       |          |
| 15:30                      | 1              | 352          | 5         | 310          |                           |      |       |                   |                           |       |      |       |          |
| 15:45                      | 1              | 336          | 5         | 266          |                           |      |       |                   |                           |       |      |       |          |
| 16:00                      | 1              | 394          | 8         | 287          |                           |      |       |                   |                           |       |      |       |          |
| 16:15                      | 1              | 382          | 9         | 277          |                           |      |       |                   |                           |       |      |       |          |
| 16:30                      | 1              | 483          | 4         | 282          | 1                         |      |       |                   |                           |       |      |       | 1        |
| 16:45                      | 1              | 405          | 4         | 312          |                           |      |       |                   |                           |       |      |       |          |
| 17:00                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 17:15                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 17:30                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 17:45                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 18:00                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 18:15                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 18:30                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 18:45                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 19:00                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 19:15                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 19:30                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 19:45                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 20:00                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 20:15                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 20:30                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| 20:45                      |                |              |           |              |                           |      |       |                   |                           |       |      |       |          |
| <b>PM Totals</b>           | <b>10</b>      | <b>2,969</b> | <b>50</b> | <b>2,295</b> | <b>1</b>                  |      |       |                   |                           |       |      |       | <b>3</b> |
| <b>Totals</b>              | <b>22</b>      | <b>5,771</b> | <b>99</b> | <b>5,845</b> | <b>6</b>                  |      |       |                   |                           |       |      |       | <b>8</b> |
|                            |                |              |           |              | <b>West Crosswalk = 6</b> |      |       |                   | <b>East Crosswalk = 8</b> |       |      |       |          |

**Avenue W & 18th Street**

**Pedestrian Corridor Warrant**

| Time<br>(15 minute<br>intervals) | Vehicle Counts |         | Pedestrian Counts            |      |       |                      |            | P.C.            |         | Periods<br>Wrnt'd<br>(1=Yes) | Points of<br>Wrnt'd<br>Periods |         |
|----------------------------------|----------------|---------|------------------------------|------|-------|----------------------|------------|-----------------|---------|------------------------------|--------------------------------|---------|
|                                  |                |         | Total Both Sides             |      |       |                      |            | Factored Counts |         |                              |                                | Warrant |
|                                  | 15 min.        | 30 min. | Child                        | Teen | Adult | Senior /<br>Impaired | Total      | 15 min.         | 30 min. | Points                       |                                |         |
| 7:00                             |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 7:15                             |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 7:30                             |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 7:45                             |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 8:00                             | 83             | 83      | 2                            |      |       |                      | 2          | 2               | 2       | 166                          |                                |         |
| 8:15                             | 92             | 175     | 10                           |      |       |                      | 10         | 10              | 12      | 2,100                        |                                |         |
| 8:30                             | 102            | 194     | 3                            |      |       |                      | 3          | 3               | 13      | 2,522                        |                                |         |
| 8:45                             | 105            | 207     | 8                            |      |       |                      | 8          | 8               | 11      | 2,277                        |                                |         |
| 9:00                             |                | 105     |                              |      |       |                      |            |                 | 8       | 840                          |                                |         |
| 9:15                             |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 9:30                             |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 9:45                             |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| <b>AM Totals</b>                 | <b>382</b>     |         | <b>23</b>                    |      |       |                      | <b>23</b>  |                 |         |                              |                                |         |
| 11:30                            | 70             |         | 3                            |      |       |                      | 3          | 3               |         |                              |                                |         |
| 11:45                            | 90             | 160     | 16                           |      |       |                      | 16         | 16              | 19      | 3,040                        |                                |         |
| 12:00                            | 108            | 198     | 3                            |      |       |                      | 3          | 3               | 19      | 3,762                        |                                |         |
| 12:15                            | 96             | 204     | 6                            |      |       |                      | 6          | 6               | 9       | 1,836                        |                                |         |
| 12:30                            | 73             | 169     | 3                            |      |       |                      | 3          | 3               | 9       | 1,521                        |                                |         |
| 12:45                            | 84             | 157     |                              |      |       |                      |            |                 | 3       | 471                          |                                |         |
| 13:00                            | 74             | 158     | 3                            |      |       |                      | 3          | 3               | 3       | 474                          |                                |         |
| 13:15                            | 64             | 138     | 1                            |      |       |                      | 1          | 1               | 4       | 552                          |                                |         |
| <b>Noon Totals</b>               | <b>659</b>     |         | <b>35</b>                    |      |       |                      | <b>35</b>  |                 |         |                              |                                |         |
| 14:00                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 14:15                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 14:30                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 14:45                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 15:00                            | 127            | 127     | 6                            |      |       |                      | 6          | 6               | 6       | 762                          |                                |         |
| 15:15                            | 94             | 221     | 17                           |      |       |                      | 17         | 17              | 23      | 5,083                        | 1                              |         |
| 15:30                            | 122            | 216     | 5                            |      |       |                      | 5          | 5               | 22      | 4,752                        |                                |         |
| 15:45                            | 114            | 236     | 9                            |      |       |                      | 9          | 9               | 14      | 3,304                        |                                |         |
| 16:00                            | 113            | 227     | 9                            |      |       |                      | 9          | 9               | 18      | 4,086                        |                                |         |
| 16:15                            | 110            | 223     | 12                           |      |       |                      | 12         | 12              | 21      | 4,683                        |                                |         |
| 16:30                            | 133            | 243     | 1                            |      |       |                      | 1          | 1               | 13      | 3,159                        |                                |         |
| 16:45                            | 136            | 269     | 7                            |      |       |                      | 7          | 7               | 8       | 2,152                        |                                |         |
| 17:00                            |                | 136     |                              |      |       |                      |            |                 | 7       | 952                          |                                |         |
| 17:15                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 17:30                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 17:45                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 18:00                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 18:15                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 18:30                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 18:45                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 19:00                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 19:15                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 19:30                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 19:45                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 20:00                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 20:15                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 20:30                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| 20:45                            |                |         |                              |      |       |                      |            |                 |         |                              |                                |         |
| <b>PM Totals</b>                 | <b>949</b>     |         | <b>66</b>                    |      |       |                      | <b>66</b>  |                 |         |                              | <b>5,083</b>                   |         |
| <b>Totals</b>                    | <b>1,990</b>   |         | <b>124</b>                   |      |       |                      | <b>124</b> |                 |         |                              |                                |         |
|                                  |                |         | 100%                         |      |       |                      | 100%       |                 |         |                              |                                |         |
|                                  |                |         | <b>North Crosswalk = 16</b>  |      |       |                      |            |                 |         |                              |                                |         |
|                                  |                |         | <b>South Crosswalk = 108</b> |      |       |                      |            |                 |         |                              |                                |         |

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

**SUMMARY**

Total Warranted PC Points: 5,083 or 5,083 / period  
 Highest PC point value: 5,083 at  
 Average PC point value: 3,233  
 No. of periods warranted: 1

**Avenue W & 18th Street**

**Pedestrian Actuated Signal Warrant**

**DO NOT ENTER DATA INTO THIS PAGE**

Prepared By: Mariniel Flores Date: Tuesday, September 12, 2017  
 Location & Roadway Classification: Ave W S (Minor Arterial) & 18th St W (Major Collector / Local)  
 Date of Count: Day of wk: Thursday Mth, Day, Yr: Thursday, June 15, 2017  
 Weather: 15.2°C  
 Traffic Control Devices: Two-way stop signs on 18th St W  
 Current Pedestrian Control: Standard crosswalks on Ave W S  
 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 190 m  
 Location: 18th St W & Ave Y S  
 Type: Stop, standard crosswalks  
 Is the orientation of this crosswalk(s) N-S? n (y or n)  
 Duration of pedestrian count 5 hrs

Elementary: **124** Total Warranted PC Points: **5,083** or **5,083** / period  
 High School: Highest PC point value: **5,083** at  
 Adult: Active Ped Corridor Points: **1**  
 Senior: Pedestrian Actuated Signal Points: **42**  
 Vehicles passing through crosswalk(s): **1,990**

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

**\*\*Install device at the South Crosswalk \*\***  
 (Note: Standard and Zebra crosswalks can be installed on both sides if pedestrian volumes are approximately equal.)

| Time (15 minute intervals) | Vehicle Counts |           |              |            | Pedestrian Counts |      |       |                   |                          |       |      |       |            |
|----------------------------|----------------|-----------|--------------|------------|-------------------|------|-------|-------------------|--------------------------|-------|------|-------|------------|
|                            | SB             | WB        | NB           | EB         | North Crosswalk   |      |       | South Crosswalk   |                          |       |      |       |            |
|                            |                |           |              |            | Child             | Teen | Adult | Senior / Impaired | Senior / Impaired        | Adult | Teen | Child |            |
| 7:00                       |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 7:15                       |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 7:30                       |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 7:45                       |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 8:00                       | 18             | 4         | 54           | 7          |                   |      |       |                   |                          |       |      |       | 2          |
| 8:15                       | 24             | 4         | 60           | 4          |                   |      |       |                   |                          |       |      |       | 10         |
| 8:30                       | 27             | 2         | 69           | 4          |                   |      |       |                   |                          |       |      |       | 3          |
| 8:45                       | 39             | 4         | 57           | 5          |                   |      |       |                   |                          |       |      |       | 8          |
| 9:00                       |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 9:15                       |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 9:30                       |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 9:45                       |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| <b>AM Totals</b>           | <b>108</b>     | <b>14</b> | <b>240</b>   | <b>20</b>  |                   |      |       |                   |                          |       |      |       | <b>23</b>  |
| 11:30                      | 28             |           | 39           | 3          | 1                 |      |       |                   |                          |       |      |       | 2          |
| 11:45                      | 40             |           | 43           | 7          | 6                 |      |       |                   |                          |       |      |       | 10         |
| 12:00                      | 37             | 1         | 67           | 3          |                   |      |       |                   |                          |       |      |       | 3          |
| 12:15                      | 34             | 1         | 57           | 4          |                   |      |       |                   |                          |       |      |       | 6          |
| 12:30                      | 36             | 3         | 30           | 4          |                   |      |       |                   |                          |       |      |       | 3          |
| 12:45                      | 41             | 1         | 39           | 3          |                   |      |       |                   |                          |       |      |       |            |
| 13:00                      | 30             | 3         | 38           | 3          | 1                 |      |       |                   |                          |       |      |       | 2          |
| 13:15                      | 23             | 1         | 35           | 5          |                   |      |       |                   |                          |       |      |       | 1          |
| <b>Noon Totals</b>         | <b>269</b>     | <b>10</b> | <b>348</b>   | <b>32</b>  | <b>8</b>          |      |       |                   |                          |       |      |       | <b>27</b>  |
| 14:00                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 14:15                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 14:30                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 14:45                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 15:00                      | 47             | 8         | 64           | 8          | 1                 |      |       |                   |                          |       |      |       | 5          |
| 15:15                      | 26             | 3         | 52           | 13         | 5                 |      |       |                   |                          |       |      |       | 12         |
| 15:30                      | 62             | 2         | 53           | 5          |                   |      |       |                   |                          |       |      |       | 5          |
| 15:45                      | 51             |           | 53           | 10         |                   |      |       |                   |                          |       |      |       | 9          |
| 16:00                      | 51             | 4         | 54           | 4          | 1                 |      |       |                   |                          |       |      |       | 8          |
| 16:15                      | 41             | 1         | 55           | 13         |                   |      |       |                   |                          |       |      |       | 12         |
| 16:30                      | 39             | 2         | 83           | 9          | 1                 |      |       |                   |                          |       |      |       |            |
| 16:45                      | 54             | 6         | 70           | 6          |                   |      |       |                   |                          |       |      |       | 7          |
| 17:00                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 17:15                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 17:30                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 17:45                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 18:00                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 18:15                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 18:30                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 18:45                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 19:00                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 19:15                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 19:30                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 19:45                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 20:00                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 20:15                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 20:30                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| 20:45                      |                |           |              |            |                   |      |       |                   |                          |       |      |       |            |
| <b>PM Totals</b>           | <b>371</b>     | <b>26</b> | <b>484</b>   | <b>68</b>  | <b>8</b>          |      |       |                   |                          |       |      |       | <b>58</b>  |
| <b>Totals</b>              | <b>748</b>     | <b>50</b> | <b>1,072</b> | <b>120</b> | <b>16</b>         |      |       |                   |                          |       |      |       | <b>108</b> |
| <b>North Crosswalk =</b>   |                |           |              |            |                   |      |       | <b>16</b>         | <b>South Crosswalk =</b> |       |      |       | <b>108</b> |



## APPENDIX D: TRAFFIC SIGNAL ASSESSMENT

# 20th Street & Avenue S

## City of Saskatoon Canadian Matrix Traffic Signal Warrant Analysis

|                    |         |
|--------------------|---------|
| Main Street (name) | 20th St |
| Side Street (name) | Ave S   |
| Quadrant / Int #   |         |

|                      |    |
|----------------------|----|
| Direction (EW or NS) | EW |
| Direction (EW or NS) | NS |

|                    |                   |
|--------------------|-------------------|
| Road Authority:    | City of Saskatoon |
| City:              | Saskatoon         |
| Analysis Date:     | 2018 Feb 02, Fri  |
| Count Date:        | 2017 Jun 20, Tue  |
| Date Entry Format: | (yyyy-mm-dd)      |

for Warrant Calculation  
Results, please hit 'Page Down'

|          |    |
|----------|----|
| Comments | MF |
|----------|----|

| Lane Configuration |    | Excel LT | Th & LT | Through | Th+RT+LT | Th & RT | Excel RT | UpStreet Signal (m) | # of Thru Lanes |
|--------------------|----|----------|---------|---------|----------|---------|----------|---------------------|-----------------|
| 20th St            | WB |          | 1       |         |          | 1       |          | 225                 | 2               |
| 20th St            | EB |          | 1       |         |          | 1       |          | 440                 | 2               |
| Ave S              | NB |          |         |         | 1        |         |          |                     |                 |
| Ave S              | SB |          |         |         | 1        |         |          |                     |                 |

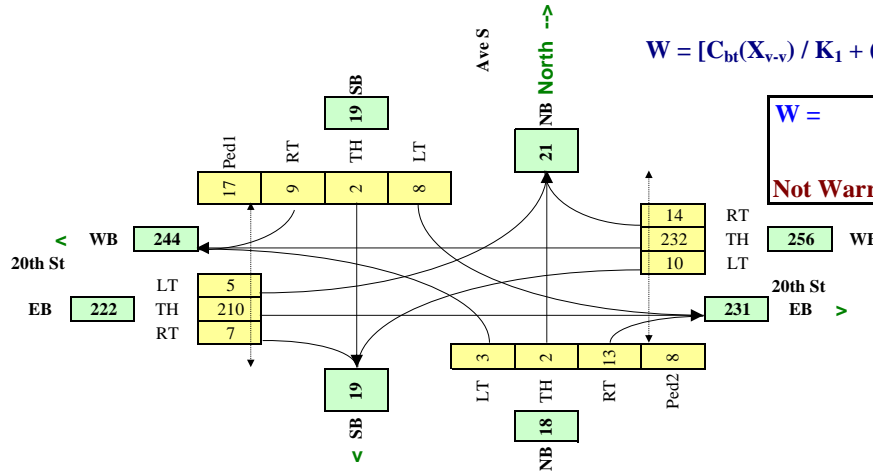
Are the Ave S NB right turns significantly impeded by through movements? (y/n) n  
Are the Ave S SB right turns significantly impeded by through movements? (y/n) n

| Demographics                  |       |         |
|-------------------------------|-------|---------|
| Elem. School/Mobility Challen | (y/n) | y       |
| Senior's Complex              | (y/n) | y       |
| Pathway to School             | (y/n) | y       |
| Metro Area Population         | (#)   | 254,000 |
| Central Business District     | (y/n) | n       |

| Other input |    | Speed (Km/h) | Truck % | Bus Rt (y/n) | Median (m) |
|-------------|----|--------------|---------|--------------|------------|
| 20th St     | EW | 50           | 2.0%    | y            | 0.0        |
| Ave S       | NS |              | 2.0%    | y            |            |

| Traffic Input         | NB |    |    | SB |    |    | WB |       |    | EB |       |    | Ped1   |        | Ped2   |        | Ped3   |        | Ped4   |        |
|-----------------------|----|----|----|----|----|----|----|-------|----|----|-------|----|--------|--------|--------|--------|--------|--------|--------|--------|
|                       | LT | Th | RT | LT | Th | RT | LT | Th    | RT | LT | Th    | RT | W Side | E Side | N Side | S Side | W Side | E Side | N Side | S Side |
| 7:00 - 8:00           | 4  | 2  | 12 | 1  | 1  | 5  | 15 | 96    | 14 | 10 | 152   | 7  | 3      | 6      | 16     | 11     |        |        |        |        |
| 8:00 - 9:00           | 2  | 1  | 11 | 8  | 1  | 5  | 7  | 150   | 17 | 1  | 211   | 5  | 12     | 1      | 12     | 12     |        |        |        |        |
| 11:30 - 12:30         | 2  | 1  | 17 | 13 | 3  | 9  | 10 | 244   | 11 | 3  | 228   | 4  | 20     | 5      | 50     | 23     |        |        |        |        |
| 12:30 - 13:30         | 2  | 4  | 16 | 10 | 2  | 8  | 9  | 269   | 19 | 4  | 231   | 6  | 20     | 3      | 32     | 29     |        |        |        |        |
| 16:00 - 17:00         | 7  | 2  | 13 | 9  | 2  | 13 | 7  | 332   | 13 | 10 | 233   | 11 | 26     | 16     | 65     | 31     |        |        |        |        |
| 17:00 - 18:00         | 3  | 2  | 8  | 8  | 2  | 12 | 14 | 299   | 7  | 2  | 207   | 9  | 22     | 19     | 44     | 13     |        |        |        |        |
| Total (6-hour peak)   | 20 | 12 | 77 | 49 | 11 | 52 | 62 | 1,390 | 81 | 30 | 1,262 | 42 | 103    | 50     | 219    | 119    |        |        |        |        |
| Average (6-hour peak) | 3  | 2  | 13 | 8  | 2  | 9  | 10 | 232   | 14 | 5  | 210   | 7  | 17     | 8      | 37     | 20     |        |        |        |        |

### Average 6-hour Peak Turning Movements



## APPENDIX E: 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) |
|----------|----------------------|---------|------|------|------|------|------|--|-----------------------------------|--|---|--|
| 20th St  | Ave P                | SKE8-46 | 12   | 16   | 16   | 12   | 16   | 72                                       | 16                                | 27   | 4   | 14   |
| 20th St  | Ave W                | SKD8-39 | 6    | 8    | 0    | 6    | 7    | 27                                       | 7                                 | 12   | 3   | 5  |
| 20th St  | Ave R                | SKD8-12 | 6    | 2    | 7    | 4    | 3    | 22                                       | 3                                 | 4  | 2   | 4  |
| 20th St  | Ave S                | SKD8-20 | 4    | 1    | 7    | 3    | 4    | 19                                       | 4                                 | 6  | 1   | 4  |
| 20th St  | 1500 W Ave O - Ave P | SKE8-45 | 3    | 7    | 5    | 1    | 2    | 18                                       | 2                                 | 0  | 0   | 4  |
| 20th St  | 1700 W Ave Q - Ave R | SKD8-11 | 2    | 4    | 3    | 4    | 4    | 17                                       | 4                                 | 1  | 0   | 3  |
| 21st St  | Ave W                | SKD8-53 | 4    | 5    | 3    | 2    | 1    | 15                                       | 1                                 | 9  | 1   | 3  |
| Ave W    | 100 S 21st - 22nd    | SKD8-55 | 5    | 5    | 1    | 3    | 1    | 15                                       | 1                                 | 5  | 1   | 3  |
| 20th St  | Ave Q                | SKD8-6  | 1    | 2    | 6    | 2    | 4    | 15                                       | 4                                 | 1  | 0   | 3  |
| 20th St  | Ave N                | SKE8-34 | 1    | 4    | 5    | 1    | 4    | 15                                       | 4                                 | 3  | 1   | 3  |
| Ave O    | 200 S 20th - 21st    | SKE8-40 | 2    | 3    | 3    | 3    | 4    | 15                                       | 4                                 | 0  | 0   | 3  |
| Ave P    | 300 S 19th - 20th    | SKE8-43 | 6    | 5    | 1    | 2    | 1    | 15                                       | 1                                 | 4  | 4   | 3  |
| Ave P    | 200 S 20th - 21st    | SKE8-47 | 3    | 6    | 6    | 0    | 0    | 15                                       | 0                                 | 0  | 0   | 3  |
| Ave R    | 300 S 19th - 20th    | SKD8-10 | 3    | 1    | 6    | 3    | 1    | 14                                       | 1                                 | 0  | 0   | 3  |
| 19th St  | Ave W                | SKD8-36 | 3    | 2    | 3    | 4    | 2    | 14                                       | 2                                 | 9  | 1   | 3  |
| 19th St  | Ave P                | SKE8-44 | 3    | 4    | 2    | 5    | 0    | 14                                       | 0                                 | 7  | 7   | 3  |
| Ave W    | 300 S 19th - 20th    | SKD8-37 | 2    | 2    | 2    | 3    | 4    | 13                                       | 4                                 | 1  | 0   | 3  |
| Ave Q    | 300 S 19th - 20th    | SKD8-4  | 0    | 5    | 1    | 4    | 3    | 13                                       | 3                                 | 1  | 1   | 3  |
| 18th St  | Ave W                | SKD9-29 | 2    | 2    | 3    | 3    | 3    | 13                                       | 3                                 | 9  | 3   | 3  |
| Ave P    | 100 S 21st - 22nd    | SKE8-49 | 4    | 3    | 2    | 3    | 1    | 13                                       | 1                                 | 3  | 3   | 3  |
| Ave Q    | 100 S 21st - 22nd    | SKD8-7  | 5    | 0    | 4    | 0    | 3    | 12                                       | 3                                 | 0  | 0   | 2  |
| Ave S    | 300 S 19th - 20th    | SKD8-18 | 3    | 1    | 3    | 3    | 1    | 11                                       | 1                                 | 0  | 0   | 2  |
| 21st St  | Ave P                | SKE8-48 | 1    | 3    | 2    | 2    | 3    | 11                                       | 3                                 | 3  | 1   | 2  |
| 20th St  | 2000 W Ave T - Ave U | SKD8-27 | 4    | 3    | 3    | 0    | 0    | 10                                       | 0                                 | 0  | 0   | 2  |
| Ave N    | 300 S 19th - 20th    | SKE8-32 | 3    | 3    | 0    | 2    | 2    | 10                                       | 2                                 | 2  | 2   | 2  |
| 20th St  | 1400 W Ave N - Ave O | SKE8-38 | 2    | 1    | 3    | 2    | 2    | 10                                       | 2                                 | 0  | 0   | 2  |
| 20th St  | 1600 W Ave P - Ave Q | SKD8-5  | 1    | 5    | 0    | 3    | 0    | 9  | 0                                 | 2  | 0   | 2  |
| Ave T    | 100 S 21st - 22nd    | SKD8-51 | 0    | 0    | 0    | 6    | 3    | 9  | 3                                 | 0  | 0   | 2  |
| 17th St  | Ave W                | SKD9-40 | 2    | 0    | 3    | 4    | 0    | 9  | 0                                 | 2  | 2   | 2  |
| 21st St  | Ave R                | SKD8-14 | 1    | 2    | 1    | 3    | 1    | 8  | 1                                 | 3  | 0   | 2  |
| 21st St  | Ave S                | SKD8-22 | 2    | 3    | 0    | 1    | 2    | 8  | 2                                 | 3  | 1   | 2  |
| 20th St  | 2100 W Ave U - Ave V | SKD8-32 | 3    | 1    | 1    | 2    | 1    | 8  | 1                                 | 0  | 0   | 2  |
| 19th St  | Ave R                | SKD8-9  | 1    | 0    | 1    | 3    | 3    | 8  | 3                                 | 2  | 0   | 2  |
| 20th St  | Ave O                | SKE8-39 | 1    | 1    | 1    | 4    | 1    | 8  | 1                                 | 1  | 1   | 2  |
| Ave S    | 200 S 20th - 21st    | SKD8-21 | 2    | 4    | 0    | 1    | 0    | 7  | 0                                 | 0  | 0   | 1  |
| 20th St  | Ave T                | SKD8-25 | 1    | 3    | 2    | 0    | 1    | 7  | 1                                 | 3  | 1   | 1  |
| 19th St  | Ave Q                | SKD8-3  | 0    | 1    | 1    | 0    | 5    | 7  | 5                                 | 3  | 1   | 1  |
| Ave U    | 100 S 21st - 22nd    | SKD8-45 | 2    | 0    | 0    | 3    | 2    | 7  | 2                                 | 1  | 0   | 1  |
| 20th St  | Ave K                | SKE8-17 | 1    | 1    | 1    | 2    | 2    | 7  | 2                                 | 0  | 0   | 1  |
| 20th St  | Ave M                | SKE8-27 | 1    | 0    | 1    | 2    | 3    | 7  | 3                                 | 2  | 1   | 1  |
| Ave K    | 300 S 19th - 20th    | SKE8-54 | 1    | 1    | 3    | 2    | 0    | 7  | 0                                 | 0  | 0   | 1  |
| Ave O    | 21st - 22nd          | SKE8-66 | 3    | 2    | 0    | 1    | 1    | 7  | 1                                 | 1  | 1   | 1  |
| Ave R    | 100 S 21st - 22nd    | SKD8-15 | 1    | 2    | 1    | 2    | 0    | 6  | 0                                 | 1  | 0   | 1  |
| 20th St  | 1800 W Ave R - Ave S | SKD8-19 | 0    | 3    | 0    | 2    | 1    | 6  | 1                                 | 1  | 0   | 1  |
| 20th St  | Ave U                | SKD8-28 | 1    | 0    | 2    | 1    | 2    | 6  | 2                                 | 3  | 1   | 1  |
| 21st St  | 1700 W Ave Q - Ave R | SKD8-66 | 3    | 0    | 3    | 0    | 0    | 6  | 0                                 | 0  | 0   | 1  |
| 21st St  | Ave K                | SKE8-18 | 2    | 2    | 2    | 0    | 0    | 6  | 0                                 | 4  | 4   | 1  |
| 21st St  | Ave M                | SKE8-29 | 2    | 1    | 1    | 2    | 0    | 6  | 0                                 | 4  | 4   | 1  |
| Ave P    | 500 S 17th - 19th    | SKE8-42 | 1    | 0    | 3    | 1    | 1    | 6  | 1                                 | 1  | 1   | 1  |
| Ave R    | 200 S 20th - 21st    | SKD8-13 | 3    | 0    | 1    | 1    | 0    | 5  | 0                                 | 0  | 0   | 1  |
| 20th St  | 1900 W Ave S - Ave T | SKD8-24 | 1    | 1    | 2    | 1    | 0    | 5  | 0                                 | 0  | 0   | 1  |
| Ave T    | 300 S 19th - 20th    | SKD8-49 | 0    | 1    | 3    | 1    | 0    | 5  | 0                                 | 0  | 0   | 1  |
| Ave S    | 100 S 21st - 22nd    | SKD8-63 | 1    | 1    | 1    | 1    | 1    | 5  | 1                                 | 0  | 0   | 1  |
| Ave U    | 200 S 20th - 21st    | SKD8-67 | 0    | 1    | 3    | 1    | 0    | 5  | 0                                 | 0  | 0   | 1  |
| 20th St  | 1300 W Ave M - Ave N | SKE8-33 | 1    | 2    | 2    | 0    | 0    | 5  | 0                                 | 1  | 1   | 1  |
| Ave L    | 100 S 21st - 22nd    | SKE8-59 | 0    | 0    | 4    | 1    | 0    | 5  | 0                                 | 0  | 0   | 1  |
| Ave L    | 200 S 20th - 21st    | SKE8-63 | 2    | 1    | 1    | 0    | 1    | 5  | 1                                 | 0  | 0   | 1  |

| 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) |
|-----------|----------------------|----------|------|------|------|------|------|--|-----------------------------------|--|---|--|
| 21st St   | Ave N                | SKE8-67  | 0    | 1    | 1    | 0    | 3    | 5  | 3                                 | 2  | 1   | 1  |
| Ave K     | 200 S 20th - 21st    | SKE8-71  | 1    | 0    | 2    | 1    | 1    | 5  | 1                                 | 0  | 0   | 1  |
| 19th St   | 1600 W Ave P - Ave Q | SKD8-2   | 0    | 0    | 1    | 2    | 1    | 4  | 1                                 | 1  | 1   | 1  |
| 20th St   | Ave V                | SKD8-33  | 0    | 1    | 0    | 1    | 2    | 4  | 2                                 | 2  | 1   | 1  |
| 20th St   | 2200 W Ave V - Ave W | SKD8-38  | 0    | 1    | 0    | 0    | 3    | 4  | 3                                 | 0  | 0   | 1  |
| Ave V     | 100 S 21st - 22nd    | SKD8-42  | 0    | 2    | 1    | 0    | 1    | 4  | 1                                 | 0  | 0   | 1  |
| 21st St   | 1600 W Ave P - Ave Q | SKD8-47  | 0    | 2    | 0    | 2    | 0    | 4  | 0                                 | 1  | 0   | 1  |
| Ave V     | 200 S 20th - 21st    | SKD8-48  | 0    | 0    | 2    | 1    | 1    | 4  | 1                                 | 0  | 0   | 1  |
| Ave U     | 300 S 19th - 20th    | SKD8-52  | 1    | 1    | 1    | 1    | 0    | 4  | 0                                 | 0  | 0   | 1  |
| Ave W     | 500 S 17th - 18th    | SKD9-17  | 0    | 1    | 0    | 1    | 2    | 4  | 2                                 | 1  | 0   | 1  |
| Ave S     | 500 S 17th - 18th    | SKD9-44  | 2    | 1    | 1    | 0    | 0    | 4  | 0                                 | 0  | 0   | 1  |
| Ave M     | 100 S 22nd - 21st    | SKE8-114 | 2    | 0    | 0    | 0    | 2    | 4  | 2                                 | 0  | 0   | 1  |
| Ave M     | 200 S 20th - 21st    | SKE8-28  | 1    | 2    | 1    | 0    | 0    | 4  | 0                                 | 1  | 1   | 1  |
| 21 St St  | Ave O                | SKE8-41  | 0    | 0    | 3    | 1    | 0    | 4  | 0                                 | 3  | 3   | 1  |
| 19th St   | 1500 Ave O - Ave P   | SKE8-57  | 1    | 1    | 0    | 0    | 2    | 4  | 2                                 | 0  | 0   | 1  |
| 21st St   | 1500 W Ave O - Ave P | SKE8-87  | 0    | 3    | 0    | 0    | 1    | 4  | 1                                 | 1  | 1   | 1  |
| 19th St   | Ave U                | SKD8-26  | 2    | 0    | 1    | 0    | 0    | 3  | 0                                 | 3  | 0   | 1  |
| 19th St   | Ave V                | SKD8-30  | 1    | 0    | 1    | 1    | 0    | 3  | 0                                 | 1  | 0   | 1  |
| 21st St   | Ave U                | SKD8-50  | 1    | 0    | 1    | 1    | 0    | 3  | 0                                 | 2  | 0   | 1  |
| 18th St   | Ave Q                | SKD9-21  | 1    | 2    | 0    | 0    | 0    | 3  | 0                                 | 0  | 0   | 1  |
| 18th St   | 1800 W Ave R - Ave S | SKD9-51  | 0    | 0    | 1    | 2    | 0    | 3  | 0                                 | 0  | 0   | 1  |
| Ave J     | 200 S 20th - 21st    | SKE8-13  | 0    | 2    | 0    | 1    | 0    | 3  | 0                                 | 0  | 0   | 1  |
| Ave N     | 200 S 20th - 21st    | SKE8-35  | 0    | 2    | 0    | 1    | 0    | 3  | 0                                 | 0  | 0   | 1  |
| Ave I     | 100 S 21st - 22nd    | SKE8-62  | 0    | 1    | 1    | 1    | 0    | 3  | 0                                 | 1  | 1   | 1  |
| Ave J     | 100 S 21st - 22nd    | SKE8-72  | 2    | 1    | 0    | 0    | 0    | 3  | 0                                 | 1  | 1   | 1  |
| Ave Q     | 200 S 20th - 21st    | SKD7-81  | 1    | 1    | 0    | 0    | 0    | 2  | 0                                 | 0  | 0   | 0  |
| 19th St   | Ave S                | SKD8-17  | 0    | 1    | 1    | 0    | 0    | 2  | 0                                 | 0  | 0   | 0  |
| 19th St W | Ave T S              | SKD8-23  | 0    | 0    | 0    | 0    | 2    | 2  | 2                                 | 1  | 1   | 0  |
| Ave V     | 300 S 19th - 20th    | SKD8-31  | 2    | 0    | 0    | 0    | 0    | 2  | 0                                 | 0  | 0   | 0  |
| Ave W     | 200 S 20th - 21st    | SKD8-40  | 0    | 1    | 1    | 0    | 0    | 2  | 0                                 | 0  | 0   | 0  |
| 19th St   | 1900 W Ave S - Ave T | SKD8-80  | 1    | 0    | 1    | 0    | 0    | 2  | 0                                 | 0  | 0   | 0  |
| 18th St   | Ave Q - Ave R        | SKD9-14  | 0    | 1    | 0    | 0    | 1    | 2  | 1                                 | 0  | 0   | 0  |
| 17th St   | Ave T                | SKD9-31  | 0    | 1    | 0    | 0    | 1    | 2  | 1                                 | 0  | 0   | 0  |
| 17th St   | Ave S                | SKD9-36  | 0    | 0    | 0    | 1    | 1    | 2  | 1                                 | 1  | 1   | 0  |
| 21st St   | Ave J                | SKE8-14  | 2    | 0    | 0    | 0    | 0    | 2  | 0                                 | 1  | 1   | 0  |
| 20th St   | Ave L                | SKE8-21  | 1    | 0    | 0    | 1    | 0    | 2  | 0                                 | 1  | 1   | 0  |
| 21 St St  | Ave L                | SKE8-22  | 0    | 0    | 2    | 0    | 0    | 2  | 0                                 | 2  | 2   | 0  |
| 20th St   | 1200 W Ave L - Ave M | SKE8-26  | 2    | 0    | 0    | 0    | 0    | 2  | 0                                 | 1  | 1   | 0  |
| Ave N     | 100 S 21st - 22nd    | SKE8-86  | 0    | 0    | 0    | 2    | 0    | 2  | 0                                 | 0  | 0   | 0  |
| 21st St   | Ave V                | SKD8-34  | 0    | 1    | 0    | 0    | 0    | 1  | 0                                 | 1  | 0   | 0  |
| 21st St   | 2200 W Ave V - Ave W | SKD8-46  | 0    | 1    | 0    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 21st St   | Ave T                | SKD8-54  | 0    | 0    | 0    | 0    | 1    | 1  | 1                                 | 0  | 0   | 0  |
| 21st St   | 1800 W Ave S - Ave T | SKD8-58  | 0    | 0    | 1    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 21st St   | Ave T - Ave U        | SKD8-64  | 0    | 0    | 0    | 1    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 21st St   | 1800 W Ave R - Ave S | SKD8-65  | 0    | 1    | 0    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 19th St   | 2200 W Ave V - Ave W | SKD8-68  | 1    | 0    | 0    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 19th St   | 1800 W Ave R - Ave S | SKD8-81  | 0    | 0    | 0    | 0    | 1    | 1  | 1                                 | 1  | 1   | 0  |
| 18th St   | Ave S                | SKD9-19  | 1    | 0    | 0    | 0    | 0    | 1  | 0                                 | 1  | 0   | 0  |
| 18th St   | Ave T                | SKD9-20  | 1    | 0    | 0    | 0    | 0    | 1  | 0                                 | 1  | 0   | 0  |
| Ave V     | 500 S 17th - 18th    | SKD9-23  | 0    | 1    | 0    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 18th St   | Ave U                | SKD9-27  | 0    | 0    | 0    | 0    | 1    | 1  | 1                                 | 1  | 1   | 0  |
| Ave U     | 500 S 17th - 18th    | SKD9-30  | 0    | 0    | 1    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 17th St   | Ave V                | SKD9-41  | 0    | 0    | 1    | 0    | 0    | 1  | 0                                 | 1  | 1   | 0  |
| Ave T     | 500 S 17th - 18th    | SKD9-47  | 0    | 0    | 1    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| Ave R     | 18th St              | SKD9-5   | 0    | 0    | 0    | 1    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 17th St   | 1700 W Ave Q - Ave R | SKD9-60  | 0    | 1    | 0    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| Ave K     | 100 S 21st - 22nd    | SKE8-30  | 0    | 1    | 0    | 0    | 0    | 1  | 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) |
|----------|----------------------|---------|------|------|------|------|------|--|-----------------------------------|--|---|--|
| 19th St  | Ave N                | SKE8-31 | 0    | 0    | 0    | 0    | 1    | 1  | 1                                 | 0  | 0   | 0  |
| Ave O    | 300 S 19th - 20th    | SKE8-53 | 1    | 0    | 0    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 20th St  | 1100 W Ave K - Ave L | SKE8-55 | 0    | 0    | 0    | 0    | 1    | 1  | 1                                 | 0  | 0   | 0  |
| 21st St  | Ave I                | SKE8-89 | 0    | 0    | 0    | 1    | 0    | 1  | 0                                 | 0  | 0   | 0  |
| 21st St  | Ave J - Ave K        | SKE8-92 | 1    | 0    | 0    | 0    | 0    | 1  | 0                                 | 0  | 0   | 0  |

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

**Pleasant Hill Neighbourhood Traffic Review**  
**Tuesday, September 26, 2017, 7:00 PM – 9:00 PM**  
**Station 20 West (206 1120 20<sup>th</sup> Street West)**

**Agenda**

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

**1. Welcome & Introductions**

(Presented by Mitch Riabko and Kathy Dahl, Facilitators)

**2. Traffic Management Presentation – Pleasant Hill Neighbourhood Traffic Review**

(Presented by Mariniel Flores, Transportation Engineer)

- Presentation Outline
  - Neighbourhood Traffic Review Process
  - Pleasant Hill Review Schedule
  - What We Heard
  - What We Did
  - What We Propose
- Neighbourhood Traffic Review Process
  - Mandate – Improve safety for all road users within neighbourhoods, reduce traffic volumes, slow vehicular speeds, improve pedestrian crossings & intersections where necessary
  - 2014 – Reviewed 11 neighbourhoods
  - 2015 & 2016 – Reviewed 8 neighbourhoods
  - 2017 – Pleasant Hill, North Park / Richmond Heights, Silverwood Heights, Dundonald, Buena Vista, Queen Elizabeth / Exhibition, Wildwood, Erindale / Arbor Creek
- Pleasant Hill Review Schedule
  - Stage 1 – Identify issues & possible solutions through community consultation (April 2017 to September 2017)
  - Stage 2 – Develop a draft traffic plan
  - Stage 3 – Present draft traffic plan to community for feedback (September 2017)
  - Stage 4 – Implement changes over time (Beginning Spring 2018)
- What We Heard
  - Speeding Concerns
    - 17<sup>th</sup> Street



- 19<sup>th</sup> Street
    - 20<sup>th</sup> Street
    - Avenue O
    - Avenue V
    - Avenue W
    - St. Mary's School Back Lane
  - Shortcutting Concerns
    - 17<sup>th</sup> Street
    - Avenue O
    - Avenue P
    - Avenue V
  - Pedestrian Safety
    - 20<sup>th</sup> Street
    - 21<sup>st</sup> Street
    - 22<sup>nd</sup> Street
    - Avenue W
  - Intersection Concerns
    - 18<sup>th</sup> Street (at Avenue R, Avenue S, Avenue T)
    - 20<sup>th</sup> Street
    - 21<sup>st</sup> Street & Avenue L
  - Parking Concerns
    - 20<sup>th</sup> Street & Avenue L
    - Avenue O
    - Avenue P & Affinity Credit Union Driveway
    - Avenue P & 19<sup>th</sup> Street
    - Columbian Place
  - Other Concerns
    - Bus Routes
    - Damaged Sidewalks and Ramps
    - Lighting
    - Recycling Bin Locations
    - Road Condition
- What We Did
  - Compiled Information Received
    - Past studies
    - Comments from initial meeting
    - Resident responses (phone calls, emails, letters)
    - Comments from Shaping Saskatoon
  - Collected Data
    - 14 intersection/pedestrian counts
    - 9 – 3-day/7-day traffic counts (24 hour) & speed measurements
    - Collision data
  - Site Visits / Field Reviews
  - Assessed Concerns
  - Generated Proposed Recommendations

- What We Propose
  - “No Parking” Signs
  - Two Hour Parking Sign
  - Lane Designation Sign
  - “Local Traffic Only” Warning Sign
  - Stop Sign
  - One-Way Signs
  - Curve Warning Sign
  - School Ahead Warning Signs
  - School Zone Flashing Beacons
  - Speed Display Board
  - Zebra Crosswalks
  - Active Pedestrian Corridor

### **3. Draft Plan (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 October 27, 2017
2. Additional public input via Shaping Saskatoon website no later than October 27, 2017 at  
<http://shapingsaskatoon.ca/discussions/pleasant-hill-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
  - 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.
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 City Council meeting.

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

Comment: There are parking issues on Avenues O, Q, P and M. The City needs to address this. Parking permit program needs to be reviewed (limited parking program).

Comment: The sign on the median island at Avenue P between 20<sup>th</sup> Street and 22<sup>nd</sup> Street constantly needs to be replaced due to big trucks travelling along this road weekly. There is parking at both sides. Dangerous goods should not be allowed near the hospital. Size and weight restrictions should be implemented and enforced.

**List of Representatives**

- Mitch Riabko, Kathy Dahl – Great Works Consulting
- Mariniel Flores, Nathalie Baudais – City of Saskatoon, Transportation & Utilities
- Councillor Hilary Gough – City of Saskatoon

**Pleasant Hill Neighbourhood Traffic Review: Table Group Discussions**

| <b>Item</b> | <b>Location</b>                              | <b>Recommendation</b>   | <b>Reason</b>  | <b>Group 1: Nathalie Baudais</b>   | <b>Group 2: Mariniel Flores</b>  |
|-------------|--|---|--|--|--|
| 1           | 20th Street & Avenue R                       | Install a "No Parking" sign on south side of 20th Street 15 metres west of Avenue R   | Improve visibility / sight line                              | Okay   | Support  |
| 2.1         | 20th Street west of Avenue R                 | Remove Right Lane Ends warning sign on north side of 20th Street for westbound traffic  | Improve driver expectancy                                    | Okay   | Good but might not address problem fully; People race to cut into left lane; Suggest physical separation; Many pedestrians (children); Potential conflicts; Should be 30 km/hr between Avenue U and Avenue R |
| 2.2         | 20th Street east of Avenue T                 | Install Right Turn Only Lane sign for westbound traffic   |  | Okay   |  |
| 3           | 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                                     | Okay; Designate northbound lane as a right turn only and completely remove parking | Support; Hospital staff park here; Narrow  |
|             |  | Install "No Parking" signs on east side of Avenue P six metres from each side of Affinity Credit Union driveway   | Improve visibility / sight line                              |  | Support  |
| 4.1         | 18th Street & Avenue Q                       | Remove Road Narrows warning sign and 20 km/hr Advisory Speed warning sign; Install "Local Traffic Only" warning sign for southbound traffic; Install stop sign for northbound traffic | Improve safety   | Okay   | Support; Speedway; More enforcement needed   |
| 4.2         | 17th Street & Back Lane south of 18th Street | Install One-Way signs for southbound traffic; Install Curve warning sign and 20 km/hr Advisory Speed warning sign for southbound traffic  | Improve safety   | Okay   | Support  |
| 4.3         | 17th Street & Avenue S                       | Remove Road Narrows warning sign and 20 km/hr Advisory Speed warning sign; Install Entry Prohibited sign for eastbound traffic  | Improve safety   | Okay   | Support  |
| 5           | 20th Street (Avenue T and Avenue U)          | Install speed display board facing eastbound traffic  | Reduce driver speed  | Okay   | Some support; Some neutral; Speed display board might be distracting; Pedestrian signs suggested   |
| 6           | 20th Street (Avenue O and Avenue P)          | Install School Ahead warning sign for eastbound traffic   | Improve visibility of school zone signs; Reduce driver speed | Okay   | Some support   |

**Pleasant Hill Neighbourhood Traffic Review: Table Group Discussions**

| <b>Item</b> | <b>Location</b>                          | <b>Recommendation</b>   | <b>Reason</b>  | <b>Group 1: Nathalie Baudais</b>   | <b>Group 2: Mariniel Flores</b>  |
|-------------|--|---|--|--|--|
| 7           | 20th Street & Avenue O / Columbian Place | Install School Zone Flashing Beacon for eastbound traffic; Relocate overhead School Ahead warning sign closer to traffic signal head  | Improve visibility of school zone signs; Reduce driver speed | Parking along Avenue O between 20th Street and 21st Street too close to the intersection; Too narrow | Support; Place a roll-out sign   |
|             |  | Install zebra crosswalk on west leg   | Improve pedestrian safety                                    | Okay   | Good if snow is cleared  |
|             |  | Modify pedestrian signal timing   | Reduce pedestrian waiting time                               | Okay   | Support  |
| 8           | 20th Street (Avenue L and Avenue M)      | Install School Ahead warning sign for westbound traffic   | Improve visibility of school zone signs; Reduce driver speed | Okay   | Some support   |
| 9           | 20th Street & Avenue M                   | Install School Zone Flashing Beacon for westbound traffic; Relocate overhead School Ahead warning sign closer to traffic signal head  | Improve visibility of school zone signs; Reduce driver speed | Okay   | Support  |
|             |  | Install zebra crosswalk on east leg   | Improve pedestrian safety                                    | Okay   | Good if snow is cleared  |
| 10          | 20th Street & Avenue N                   | Install zebra crosswalk on west leg   | Improve pedestrian safety                                    | Okay   | Drivers are not stopping so Active Pedestrian Corridor is not working; Pedestrian Actuated Signal is better since drivers are required to stop |
| 11          | 20th Street & Avenue S                   | Install Pedestrians Prohibited / Allowed / Arrow sign for northbound & southbound pedestrians on east leg; Replace existing Pedestrian Actuated Signal with an Active Pedestrian Corridor | Improve pedestrian crossing compliance                       | Okay   | Support; Modify pedestrian signal timing; Full traffic signal suggested  |
|             |  | Install zebra crosswalk on west leg   | Improve pedestrian safety                                    | Okay   | Support if snow is cleared   |

## Additional Comments

| Item | Location               | Comments  |
|------|------------------------|---|
| 1    | 19th Street            | Speeding  |
| 2    | 19th Street & Avenue P | Icy   |
| 3    | 20th Street            | Cyclists on 20th Street; Cyclist accident by Avenue M   |
| 4    | 21st Street            | Parking too close to south driveway between Avenue O and Avenue P; No sidewalk on north side  |
| 5    | 21st Street & Avenue L | Vehicles are not stopping fully   |
| 6    | Avenue L               | Potholes in back alley; Need more gravel  |
| 7    | Avenue M               | Snow clearing needed between 20th Street and 22nd Street; Sidewalk is missing at 131, 133 and 135 Avenue M South; Potholes in back alley; Need more gravel  |
| 8    | Avenue M & 21st Street | Many accidents; Speeding; Upgrade yield signs to stop signs; Four-way stop suggested; Parking is difficult due to church and hospital (would like to look into Residential Parking Permit Program)  |
| 9    | Avenue O               | Parking by medical clinic; Parking behind / in front of the church; Using church's private parking lot; Parking too close to west driveway between 20th Street and 21st Street  |
| 10   | Avenue P               | Speeding; Semis travel on this road; Truck route ends south of rail crossing but trucks continue northbound to 22nd Street; Trucks damaging planters/signage; Educate drivers/businesses about truck route; Cabs parking in the 300 block; May need a cab stand near hospital north of 20th Street (by drugstore)   |
| 11   | Avenue P & 17th Street | Operations at Inland Steel spilling into street; Weekend drop-off for scrap metal; Like three-way stop but may need stop bars   |
| 12   | Avenue P & 19th Street | Safety concerns   |
| 13   | Avenue P & 22nd Street | Traffic shortcuts right through parking lot to turn right; Left turn lane traffic goes north  |
| 14   | Avenue Q               | Safety concerns at St. Gregger's School   |
| 15   | Avenue W & 17th Street | Major speed zone from 11th Street to 33rd Street (especially south of 17th Street); Need a four-way stop, crosswalks, playground zones and/or speed display board   |
| 16   | Avenue W & 21st Street | Speeding (in school zone too)   |
| 17   | General                | Suggest flashing red pedestrian device; Traffic doesn't stop at Active Pedestrian Corridors; School zone signs; Police enforcement needed; Need a speed display board; Hospital should encourage staff to use parking garage; 2 hour parking is not working because visitors use it and nurses move their cars; New units with 1 stall per unit; Another 30 km/hr sign by flower shop suggested; More enforcement is needed; Snow clearing needs to be a priority; Increase speed limit on 22nd Street from Witney Avenue to Betts Avenue; Trailers/semis on 21st Street, Avenue P and Avenue W |

## APPENDIX G: DECISION MATRIX

| Item | Location                                     | Recommendation  | Reason   | Group 1: Nathalie Baudais  | Group 2: Mariniel Flores   | Decision   |
|------|--|---|--|--|--|--|
| 1    | 20th Street & Avenue R                       | Install a "No Parking" sign on south side of 20th Street 15 metres west of Avenue R   | Improve visibility / sight line                              | Okay   | Support  | Carried  |
| 2.1  | 20th Street west of Avenue R                 | Remove Right Lane Ends warning sign on north side of 20th Street for westbound traffic  | Improve driver expectancy                                    | Okay   | Good but might not address problem fully; People race to cut into left lane; Suggest physical separation; Many pedestrians (children); Potential conflicts; Should be 30 km/hr between Avenue U and Avenue R | Carried  |
| 2.2  | 20th Street east of Avenue T                 | Install Right Turn Only Lane sign for westbound traffic   |  | Okay   |  | Carried  |
| 3    | 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                                     | Okay; Designate northbound lane as a right turn only and completely remove parking                   | Support; Hospital staff park here; Narrow  | Carried  |
|      |  | Install "No Parking" signs on east side of Avenue P six metres from each side of Affinity Credit Union driveway   | Improve visibility / sight line                              |  | Support  | Carried  |
| 4.1  | 18th Street & Avenue Q                       | Remove Road Narrows warning sign and 20 km/hr Advisory Speed warning sign; Install "Local Traffic Only" warning sign for southbound traffic; Install stop sign for northbound traffic     | Improve safety   | Okay   | Support; Speedway; More enforcement needed   | Carried  |
| 4.2  | 17th Street & Back Lane south of 18th Street | Install One-Way signs for southbound traffic; Install Curve warning sign and 20 km/hr Advisory Speed warning sign for southbound traffic  | Improve safety   | Okay   | Support  | Carried  |
| 4.3  | 17th Street & Avenue S                       | Remove Road Narrows warning sign and 20 km/hr Advisory Speed warning sign; Install Entry Prohibited sign for eastbound traffic  | Improve safety   | Okay   | Support  | Carried  |
| 5    | 20th Street (Avenue T and Avenue U)          | Install speed display board facing eastbound traffic  | Reduce driver speed  | Okay   | Some support; Some neutral; Speed display board might be distracting; Pedestrian signs suggested   | Carried  |
| 6    | 20th Street (Avenue O and Avenue P)          | Install School Ahead warning sign for eastbound traffic   | Improve visibility of school zone signs; Reduce driver speed | Okay   | Some support   | Carried  |
| 7    | 20th Street & Avenue O / Columbian Place     | Install School Zone Flashing Beacon for eastbound traffic; Relocate overhead School Ahead warning sign closer to traffic signal head  | Improve visibility of school zone signs; Reduce driver speed | Parking along Avenue O between 20th Street and 21st Street too close to the intersection; Too narrow | Support; Place a roll-out sign   | Carried  |
|      |  | Install zebra crosswalk on west leg   | Improve pedestrian safety                                    | Okay   | Good if snow is cleared  | Carried  |
|      |  | Modify pedestrian signal timing   | Reduce pedestrian waiting time                               | Okay   | Support  | Carried  |
| 8    | 20th Street (Avenue L and Avenue M)          | Install School Ahead warning sign for westbound traffic   | Improve visibility of school zone signs; Reduce driver speed | Okay   | Some support   | Carried  |
| 9    | 20th Street & Avenue M                       | Install School Zone Flashing Beacon for westbound traffic; Relocate overhead School Ahead warning sign closer to traffic signal head  | Improve visibility of school zone signs; Reduce driver speed | Okay   | Support  | Carried  |
|      |  | Install zebra crosswalk on east leg   | Improve pedestrian safety                                    | Okay   | Good if snow is cleared  | Carried  |
| 10   | 20th Street & Avenue N                       | Install zebra crosswalk on west leg   | Improve pedestrian safety                                    | Okay   | Drivers are not stopping so Active Pedestrian Corridor is not working; Pedestrian Actuated Signal is better since drivers are required to stop   | Carried  |
| 11   | 20th Street & Avenue S                       | Install Pedestrians Prohibited / Allowed / Arrow sign for northbound & southbound pedestrians on east leg; Replace existing Pedestrian Actuated Signal with an Active Pedestrian Corridor | Improve pedestrian crossing compliance                       | Okay   | Support; Modify pedestrian signal timing; Full traffic signal suggested  | Carried sign installation; Removed replacement of Pedestrian Actuated Signal; Added modification of pedestrian signal timing |
|      |  | Install zebra crosswalk on west leg   | Improve pedestrian safety                                    | Okay   | Support if snow is cleared   | Carried; Added zebra crosswalk on north leg  |



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

| Item | Location   | Comments  | Response   |
|------|--|---|--|
| 1    | 19th Street  | Speeding  | More details regarding the location is required to request a speed study   |
| 2    | 19th Street & Avenue P                               | Icy   | Forwarded to Roadways & Operations   |
| 3    | 20th Street  | Cyclists on 20th Street; Cyclist accident by Avenue M   | Included in the review of collision data; Not a high-collision location  |
| 4    | 21st Street  | Parking too close to south driveway between Avenue O and Avenue P; No sidewalk on north side  | Parking concern forwarded to Parking Services; Missing sidewalk location is on a priority list, which is subject to funding  |
| 5    | 21st Street & Avenue L                               | Vehicles are not stopping fully   | Forwarded to Saskatoon Police Service  |
| 6    | Avenue L   | Potholes in back alley; Need more gravel  | Forwarded to Roadways & Operations   |
| 7    | Avenue M   | Snow clearing needed between 20th Street and 22nd Street; Sidewalk is missing at 131, 133 and 135 Avenue M South; Potholes in back alley; Need more gravel  | Concerns regarding snow removal and potholes were forwarded to Roadways & Operations; Missing sidewalk location is on a priority list, which is subject to funding   |
| 8    | Avenue M & 21st Street                               | Many accidents; Speeding; Upgrade yield signs to stop signs; Four-way stop suggested; Parking is difficult due to church and hospital (would like to look into Residential Parking Permit Program)  | Included in the review of collision data; Not a high-collision location; Traffic count will collected in spring 2018 to determine if a four-way stop is warranted – added to the recommendation list; Information about the Residential Parking Program was provided |
| 9    | Avenue O   | Parking by medical clinic; Parking behind / in front of the church; Using church's private parking lot; Parking too close to west driveway between 20th Street and 21st Street  | "2 Hour Parking" signs will be installed on the west side of Avenue O between 20th Street and 21st Street – added to the recommendation list   |
| 10   | Avenue P   | Speeding; Semis travel on this road; Truck route ends south of rail crossing but trucks continue northbound to 22nd Street; Trucks damaging planters/signage; Educate drivers/businesses about truck route; Cabs parking in the 300 block; May need a cab stand near hospital north of 20th Street (by drugstore) | More details regarding the location is required to request a speed study; A Truck Prohibited sign has been installed at Avenue P & 17th Street; Concern regarding cabs forwarded to Parking Services   |
| 11   | Avenue P & 17th Street                               | Operations at Inland Steel spilling into street; Weekend drop-off for scrap metal; Like three-way stop but may need stop bars   | Forwarded to Bylaw Compliance  |
| 12   | Avenue P & 19th Street                               | Safety concerns   | Based on site visits, current devices are providing adequate control   |
| 13   | Avenue P & 22nd Street                               | Traffic shortcuts right through parking lot to turn right; Left turn lane traffic goes north  | Forwarded to Saskatoon Police Service  |
| 14   | Avenue W & 17th Street                               | Major speed zone from 11th Street to 33rd Street (especially south of 17th Street); Need a four-way stop, crosswalks, playground zones and/or speed display board   | Speed assessment south of 17th Street will be completed in spring 2018 – added to the recommendation list  |
| 15   | Avenue W & 21st Street                               | Speeding (in school zone too)   |  |
| 16   | General  | Suggest flashing red pedestrian device  | Flashing red pedestrian device is not standard practice and is not in use in the City at this time   |
|      |  | Traffic doesn't stop at Active Pedestrian Corridors   | Site visits and field reviews confirm that the majority of traffic are stopping for pedestrians crossing at Active Pedestrian Corridors  |
|      |  | School zone signs; Another 30 km/hr sign by flower shop suggested; More enforcement is needed   | Adjustments to the school zone signage on 20th Street has been recommended to improve visibility and increase compliance   |
|      |  | Police enforcement needed   | Forwarded to Saskatoon Police Service  |
|      |  | Need a speed display board  | Speed display board is recommended for 20th Street between Avenue T and Avenue U   |
|      |  | Hospital should encourage staff to use parking garage; 2 hour parking is not working because visitors use it and nurses move their cars; New units with 1 stall per unit  | Forwarded to Parking Services  |
|      |  | Snow clearing needs to be a priority  | Forwarded to Roadways & Operations   |
|      |  | Increase speed limit on 22nd Street from Witney Avenue to Betts Avenue  | Speed limit on 22nd Street was reviewed in 2016 and a 60 kph speed limit was recommended   |
|      | Trailers/semis on 21st Street, Avenue P and Avenue W | Trucks making local deliveries are allowed on City streets provided that they use the most direct route from the arterial road network to their destination   |  |