## GITY OF SASKATOOL

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## Mount Royal

## Mount Royal Neighbourhood Traffic Review

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Authorization


Checked By:


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## Acknowledgements

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- Mount Royal residents
- Mount Royal Community Association
- Saskatoon Police Service
- Saskatoon Light \& Power
- Saskatoon Fire Department
- City of Saskatoon Environmental Services
- City of Saskatoon Transit
- City of Saskatoon Planning \& Development
- City of Saskatoon Public Works
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- City of Saskatoon Transportation
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## EXECUTIVE SUMMARY

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

A public meeting was held in June of 2015 to identify traffic concerns and potential solutions within the Mount Royal 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 Management Plan was developed and presented to the community at a follow-up meeting held in November 2015.

A summary of recommended improvements for the Mount Royal neighbourhood are included in Table ES-1. The summary identifies the locations, the recommended improvement, and a schedule for implementation. The schedule to implement the Traffic Management 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 year); medium-term ( 3 to 5 years) and long-term ( 5 years plus). Accordingly, the specific time frame to implement the improvements for these neighbourhoods ranges from 1 to 5 years.

The resulting proposed Mount Royal Traffic Management Plan is illustrated in Exhibit ES-1.

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Table ES-1: Mount Royal Neighbourhood Recommended Improvements

| Item | Location | Recommendation | Reason |
| :---: | :---: | :---: | :---: |
| 1 | Avenue W \& 29 ${ }^{\text {th }}$ Street | Four-way Stop Signs | Improve driver \& pedestrian safety |
| 2 | Avenue W \& Rylston Road | Curb Extensions \& Zebra Crosswalk on south side; parking restrictions on southwest corner | Reduce speed, improve pedestrian safety \& improve sightlines |
| 3 | Avenue W \& $23{ }^{\text {rd }}$ Street | Hazard Boards | Enhance visibility of stop signs |
| 4 | $29^{\text {th }}$ Street - intersections along bus route (Avenue Q, Avenue R, Avenue X, Avenue Y) | Stop Signs | Improve safety along bus route (as per Policy C07-007, stop signs are warranted along a transit route) |
| 5 | Avenue T \& Rylston Road | Zebra Crosswalks | Improve pedestrian safety in front of school |
| 6 | Avenue P \& 23 ${ }^{\text {rd }}$ Street | Hazard Boards | Enhance visibility of stop signs |
| 7 | $23^{\text {rd }}$ Street \& Avenue R | Stop Signs | Improve intersection safety |
| 8 | $23^{\text {rd }}$ Street \& Avenue $T$ | Four-way Stop Signs | Improve intersection \& pedestrian safety |
| 9 | Back lane south of Circle Drive between $31^{\text {st }}$ Street to pedestrian tunnel | 20kph Speed Signs | Reduce speed |
| 10 | Edmonton Ave near 31 ${ }^{\text {st }}$ Street | Speed Display Board | Reduce Speed |
| 11 | $23^{\text {rd }}$ Street \& Montreal Avenue | Remove all temporary traffic calming | Direction of yield signs were changed in 2013 as part of the Blairmore Bikeway. Traffic calming not needed. |
| 12 | Avenue W-22 ${ }^{\text {nd }}$ Street to $23^{\text {rd }}$ Street | Sidewalk on west side | Improve pedestrian safety \& connectivity(connects to grocery store) |
| 13 | $23^{\text {rd }}$ Street - Avenue $P$ to Avenue Q | Sidewalk on both sides | Improve pedestrian safety \& connectivity (connects to school) |
| 14 | $23^{\text {rd }}$ Street between <br> Avenue Q \& Avenue W | Sidewalk on south side | Improve pedestrian safety \& connectivity |
| 15 | Bedford Road between Avenue W \& Avenue T | Sidewalk on north side | Improve pedestrian safety \& connectivity (school route) |

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## 1 INTRODUCTION

As the City of Saskatoon continues to grow many neighbourhoods face growing issues such as pedestrian safety, cut-through traffic, and increased speeds on local roads within neighbourhoods. In August 2013, City Council adopted the City of Saskatoon Traffic Guidelines and Tools that outlined 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 that were developed by the Administration and residents in collaborative fashion. Accordingly, this report provides the traffic management plan for Mount Royal.

The Mount Royal neighbourhood is located on the west side of the South Saskatchewan River and is bound by Circle Drive to the west, Avenue P \& McMillan Avenue to the east, $31^{\text {st }}$ Street to the north, and $22^{\text {nd }}$ Street to the south. The area use is mostly residential, with a few schools (Mount Royal Collegiate, Howard Coad School, St. Gerard School, Royal West Campus, Saskatoon Trades and Skills Centre) and parks; as well as existing commercial land use along $22^{\text {nd }}$ Street.

The development and implementation of the traffic management plan includes four stages:

- Stage 1 - Identify existing problems, concerns and possible solutions through the initial neighbourhood consultation and the Shaping Saskatoon Website.
- Stage 2 - Develop a draft traffic plan based on resident's 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 specific time frame, short-term (1 to 2 years), medium-term (3 to 5 years) or long-term ( 5 years plus).

This report present the study findings and recommendations.

## 2 IDENTIFYING ISSUES, CONCERNS, AND POSSIBLE SOLUTIONS

A public meeting was held in June of 2015 to identify traffic concerns within the neighbourhood. At the meeting, residents were given the opportunity to express their concerns and suggest possible solutions. Meeting minutes are provided in Appendix A.

The following pages summarize the concerns and suggested solutions identified during the initial consultation with the neighbourhood 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). In the case of Mount Royal, the bordering arterial streets ( $22^{\text {nd }}$ Street and Avenue W ) are designated to accommodate larger traffic volumes.

As speeding often accompanies shortcutting, these concerns have been grouped into one category.

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

- $29^{\text {th }}$ Street
- Avenue W (especially near daycare south of $29^{\text {th }}$ Street)
- $23^{\text {rd }}$ Street
- Edmonton Avenue
- Avenue T (in front of Howard Coad School)
- Montreal Avenue (between Rylston Road \& Bedford Road)

Proposed solutions identified by residents:

- Enforcement
- Reduce the speed limit
- Introduce or increase area of school speed zone
- Four-way stop signs
- Stop signs
- Traffic calming devices (ie. curb extensions, speed humps)
- Speed display board
- Photo radar
- Reduce speed limit


### 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."

Neighbourhood concerns regarding pedestrian safety were at the following locations:

- $29^{\text {th }}$ Street \& Avenue W
- $29^{\text {th }}$ Street $\&$ Avenue R
- $29^{\text {th }}$ Street $\&$ Avenue T
- $29^{\text {th }}$ Street $\&$ Avenue $X$
- $23^{\text {rd }}$ Street \& Avenue X (near grocery store)
- Avenue W \& $23^{\text {rd }}$ Street
- Avenue W \& Rylston Road

Proposed solutions identified by residents:

- Narrow the roadway with traffic calming devices to improve pedestrian safety
- Install zebra crosswalks
- Remove temporary traffic calming
- Install pedestrian activated device (i.e. Pedestrian Actuated Signals or Active Pedestrian Corridor)
- Move schools away from main roads


### 2.3 Concern 3 - Traffic Control

Traffic control signs are used in order to assign the right-of-way. City of Saskatoon Council Policy C07-007 Traffic Control - Use of Stop and Yield Signs, April 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.

An all-way stop must meet the conditions for traffic volume, collision history, and must have a balanced volume from each leg to operate sufficiently.

Neighbourhood concerns regarding traffic controls were at the following locations:

- $29^{\text {th }}$ Street $\&$ Avenue W
- $29^{\text {th }}$ Street \& Avenue R
- $23^{\text {rd }}$ Street \& Witney Avenue
- $23^{\text {rd }}$ Street \& Avenue T
- $23^{\text {rd }}$ Street \& Avenue W

Proposed solutions identified by residents:

- Stop signs
- Four-way stop
- Enforcement for rolling through stop signs


### 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 crossing.

Neighbourhood concerns regarding parking were at the following locations:

- $29^{\text {th }}$ Street \& Avenue W
- Avenue W south of $29^{\text {th }}$ Street (in front of daycare)
- Witney Avenue near Rylston Road (Royal West Campus)
- Avenue W \& Rusholme Road
- Avenue W \& Rylston Road
- Avenue T (in front of Howard Coad School)

Proposed solutions identified by residents:

- Parking restrictions
- Parking enforcement
- Implement pick-up/drop-off zone
- Install curb extensions to restrict parking


### 2.5 Concern 5 - Maintenance

Condition of the streets in Mount Royal was identified as a concern (i.e. snow clearing, potholes, tree trimming, and temporary traffic calming devices).

Neighbourhood concerns regarding maintenance were:

- Trees blocking driver's view on side streets


### 2.6 Concern 6 - Major Intersections

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

Neighbourhood concerns regarding major intersections:

- $22^{\text {nd }}$ Street \& Avenue $P$
- $22^{\text {nd }}$ Street $\&$ Witney Avenue
- $22^{\text {nd }}$ Street \& Avenue W

Proposed solutions identified by residents:

- $\quad 22^{\text {nd }}$ St $\&$ Witney Ave:
- Improvements needed for eastbound left turn
- $\quad 22^{\text {nd }}$ St \& Ave W:
- Left turn arrow needed heading north
- Advanced green light needed for eastbound and westbound left turns
- More crossing time for pedestrians
- $22^{\text {nd }}$ Street \& Avenue P:
- Implement left-turn arrow phases


## 3 ASSESSMENT

### 3.1 Methodology

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

- Create a detailed list of all the issues provided by the residents.
- Collect historical traffic studies and information the City has on file for the neighbourhood.
- Prepare a data collection program that will provide the appropriate information needed to undertake the assessments.
- Complete the data collection, which may include:
- Intersection turning moving counts
- Pedestrian counts
- Daily and weekly traffic counts
- Average speed measurements
- 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 volumes (peak hours, daily, and weekly), travel speed, and pedestrian movements. A map of the traffic data collection is shown in Appendix B.

### 3.2 Travel Volumes and Travel Speeds

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

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

Travel speeds were measured to determine the $85^{\text {th }}$ percentile speed, which is the speed at which 85 percent of vehicles are travelling at or below. The speed limit in the Mount Royal neighbourhood is 50 kph , except for school zones where the speed limit is 30 kph from September and June, 8:00am to 5:00pm, excluding weekends.

The speed studies and Average Daily Traffic (ADT) on streets where speeding was identified as an issue are summarized in Table 3-2.

Table 3-2: Speed Studies and Average Daily Traffic Counts (2015)

| Street | Between | Speed (kph) | Average Daily <br> Traffic (vpd) | Class |
| :---: | :---: | :---: | :---: | :---: |
| Avenue T | Ryston Road \& 29th Street | 43.8 | 360 | local |
| Witney Avenue | Rusholme Road \& Rylston Road | $\begin{aligned} & \text { school=48.6; } \\ & \text { regular=52.3 } \end{aligned}$ | 1,369 |  |
| 23rd Street | Avenue $X$ to Avenue Y | 45.2 | 1,128 |  |
| 23rd Street | Montreal Avenue \& Ottawa Avenue | school=40.6; <br> regular=46.8 | 854 |  |
| 23rd Street | Avenue S to Avenue V | 47.9 | 1,301 |  |
| Montreal Avenue | Bedford Road to Rusholme Road | 35.5 | 102 |  |
| 29th Street | Witney Avenue \& east of curve to Vancouver Ave | 50.4 | 414 |  |
| 29th Street |  <br> Avenue T | 54.1 | 1,966 | collector |
| Edmonton Ave - north of 31st St | 31st Street \& curve near Riversdale Kiwanis Park | 60.6 | 5,740 | major collector |
| Avenue W | Rylston Road \& 29th <br> Street (school zone) | $\begin{aligned} & \text { school=47.3; } \\ & \text { regular=55.4 } \end{aligned}$ | 4,937 |  |
| Avenue W | 29th Street \& 30th Street | 56.5 | 5,094 |  |

### 3.3 Traffic Control Assessments

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

Turning movement counts were completed to determine the need for an all-way (i.e. three-way or four-way) stop control. Criteria outlined in Council Policy C07-007 that may warrant an all-way stop include a peak hour count greater than 600 vehicles or an ADT greater than 6,000 vehicles per day or when five or more collisions are reported in the last twelve month period and are of a type susceptible to correction by an all-way stop control.

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

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

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

Table 3-3: All-Way Stop Assessments
$\left.\left.\begin{array}{|c|c|c|c|c|c|c|}\hline \text { Location } & \begin{array}{c}\text { Peak } \\ \text { Hour } \\ \text { Count }\end{array} & \begin{array}{c}\text { Average } \\ \text { Daily Traffic } \\ \text { (vpd) }\end{array} & \begin{array}{c}\text { \# of Collisions } \\ \text { within most } \\ \text { recent 12 months }\end{array} & \begin{array}{c}\text { \% of Traffic } \\ \text { from minor } \\ \text { street }\end{array} & \begin{array}{c}\text { Traffic Signals } \\ \text { or all-way stop } \\ \text { within 200m }\end{array} & \begin{array}{c}\text { All-Way Stop } \\ \text { Warranted }\end{array} \\ \hline \begin{array}{c}29^{\text {th }} \text { Street \& } \\ \text { Avenue T }\end{array} & 278 & 3080 & 1 & 12 \% & \text { no } & \begin{array}{c}\text { All-way stop not } \\ \text { warranted. }\end{array} \\ \hline \begin{array}{c}\text { Bedford Road } \\ \text { \& Avenue T }\end{array} & 53 & 640 & 4 & 29 \% & \begin{array}{c}\text { High collisions. Yield } \\ \text { signs were installed } \\ \text { in October 2014 }\end{array} \\ \text { (after collision }\end{array}\right] \begin{array}{c}\text { no } \\ \text { analysis 2009-2013 } \\ \text { data); therefore no } \\ \text { further review } \\ \text { needed. }\end{array}\right]$

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

### 3.4 Pedestrian Assessments

Pedestrian assessments are conducted to determine the need for pedestrian actuated signalized crosswalks which, in adherence to the City of Saskatoon Council Policy C07-018 Traffic Control at Pedestrian Crossings, November 15, 2004, are typically active pedestrian corridor (flashing yellow lights) or pedestrian-actuated signals. A warrant system assigns points for a variety of conditions that exist at the crossing location, including:

- The number of traffic lanes to be crossed;
- the presence of a physical median;
- the posted speed limit of the street;
- the distance the crossing point is to the nearest protected crosswalk point; and
- the number of pedestrian and vehicles at the location.

Pedestrian and traffic data is collected during the five peak hours of: 8:00am to 9:00am, 11:30am to $1: 30 \mathrm{pm}$, and $3: 00 \mathrm{pm}$ to $5: 00 \mathrm{pm}$.

In addition, if a pedestrian actuated crosswalk is not warranted, a standard marked pedestrian crosswalk, or a zebra crosswalk (i.e. striped) may be considered. A summary of the pedestrian studies are provided in Table 3-4.

## Table 3-4: Pedestrian Assessment

| Location | Number of Pedestrians Crossing <br> During Peak Hours | Results |
| :---: | :---: | :---: |
| Avenue W \& 29 th Street | 29 |  |
| $29^{\text {th }}$ Street \& Avenue T | 20 | Pedestrian Device Not Warranted |
| Bedford Road \& Avenue T | 7 |  |
| $29^{\text {th }}$ Street \& Avenue R | 120 |  |
| Avenue W \& Rylston Road | 18 |  |
| $29^{\text {th }}$ Street \& Avenue X |  |  |

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

### 3.5 Collision Analysis

The most recently available five year collision statistics (2009 to 2013) were provided by SGI. High-collision locations, typically noted as the locations with an average of two or more collisions per year, were reviewed in more depth to identify trends. These include:

- Avenue P \& 23 ${ }^{\text {rd }}$ Street
- Avenue W \& $29^{\text {th }}$ Street
- Avenue P \& 29 ${ }^{\text {th }}$ Street
- Avenue P \& Rusholme Road
- Avenue W \& Rusholme Road
- Bedford Road \& Avenue T
- $23^{\text {rd }}$ Street $\&$ Avenue Q
- $23^{\text {rd }}$ Street $\&$ Avenue $T$
- Avenue P \& Bedford Road
- Avenue W \& $23^{\text {rd }}$ Street

Details of the collision analysis are provided Appendix E.

## 4 PLAN DEVELOPMENT

### 4.1 Methodology

Stage 3 of the 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 improvement
- Present the draft plan to the residents at a follow-up public meeting
- Circulate the draft plan to the Civic Divisions for comment
- Revise the draft plan based on feedback from the stakeholders
- Prepare a technical document summarizing the recommended plan and project process

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

### 4.2 Speeding and Shortcutting

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

The recommended improvements to address speeding and shortcutting are detailed in Table 41.

Table 4-1: Recommended Speeding and Shortcutting Improvements

| Location | Recommended Improvement | Justification |
| :---: | :---: | :---: |
| Avenue W \& Rylston Road | Curb Extensions on south side | Reduce speed \& improve pedestrian <br> safety |
| Back lane south of Circle Drive <br> between 31 <br> st Street to pedestrian <br> tunnel | 20kph Speed Signs | Reduce speed |
| Edmonton Ave near 31 ${ }^{\text {st Street }}$ | Speed Display Board | Reduce Speed |
| $23^{\text {rd }}$ Street \& Montreal Avenue | Remove all temporary traffic <br> calming | Direction of yield signs were <br> changed in 2013 as part of the <br> Blairmore Bikeway. Traffic calming <br> not needed. |

### 4.3 Pedestrian Safety

The recommended improvements to increase pedestrian safety are detailed in Table 4-2.
Table 4-2: Recommended Pedestrian Safety Improvements

| Location | Recommended Improvement | Justification |
| :---: | :---: | :---: |
| Avenue W \& Rylston Road | Zebra Crosswalk on south side | Improve pedestrian safety near <br> schools |
| Avenue T \& Rylston Road | Zebra Crosswalks | Improve pedestrian safety in front <br> of school |
| Avenue W - 22 ${ }^{\text {nd }}$ Street to 23 |  |  |

### 4.4 Traffic Control

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 Traffic Control Improvements

| Location | Recommended Improvement | Justification |
| :---: | :---: | :---: |
| Avenue W \& $29^{\text {th }}$ Street | Four-way Stop Signs | Improve driver \& pedestrian safety |
| $29^{\text {th }}$ Street - intersections along bus <br> route(Avenue Q, Avenue R, Avenue <br> X, Avenue Y) | Stop Signs | Improve safety along bus route (as <br> per Policy C07-007, stop signs are <br> warranted along a transit route) |
| $23^{\text {rd }}$ Street \& Avenue R | Stop Signs | Improve intersection safety (as per <br> Policy C07-007, stop signs are <br> warranted when three or more <br> collisions are reported within most <br> recent 12 months) |
| $23^{\text {rd }}$ Street \& Avenue T | Four-way Stop Signs | Improve intersection safety (as per <br> Policy C07-007, an all-way stop is <br> warranted when five or more <br> collisions are reported within most <br> recent 12 months) |
| Avenue W \& 23 ${ }^{\text {rd }}$ Street | Hazard Boards | Enhance visibility of stop signs |
| Avenue P \& 23 rd Street | Hazard Boards | Enhance visibility of stop signs |

### 4.5 Parking Improvements

The recommended improvements to parking that will improve the level of safety are detailed in Table 4-4.

Table 4-4: Recommended Parking Improvements

| Location | Recommended Improvement | Justification |
| :---: | :---: | :---: |
| Avenue W \& Rylston Road | Parking restrictions on southwest <br> corner | Improve sightlines |

### 4.6 Follow Up Consultation - Presentation of Traffic Management Plan

The initial recommended improvements were presented at a follow-up public meeting in November 2015 (for the meeting minutes refer to Appendix A). Recommended improvements that were not supported by the residents were eliminated or altered accordingly. A decision matrix detailing the list of recommended improvements presented at the follow-up meeting are included in Appendix F. A decision matrix for additional comments received after the draft traffic plan is also included in Appendix F.

The recommendations were circulated to the Civic Divisions (including Saskatoon Police Service, Saskatoon Light \& Power, Saskatoon Fire Department, Environmental Services, and Transit) to gather comments and concerns. General support was received.

### 4.7 Major Intersection Reviews and Corridor Studies

The mandate for the Neighbourhood Traffic Management Reviews is to focus on neighbourhood streets such as local roads and collector roads. As almost all neighbourhoods are bound by arterial streets, such as 22 nd Street, it is not uncommon to have residents raise issues regarding these streets. However, arterial streets are much more complex than local or collector streets due to larger traffic volumes, different types of drivers (commuters), coordinated traffic signals, transit accommodation, and potentially many commercial accesses. To properly address these, the typical transportation engineering approach would require a corridor study or a major intersection review, both of which are expensive and require significant resources. Through the Neighbourhood Traffic Reviews, the City is compiling a list of issues on arterial streets. The Transportation Division is working to prioritize the issues, identify the work requirements, and secure funding to complete these types of assessments.

## 5 RECOMMENDED PLAN \& COST ESTIMATES

Stage 4, the last stage of the process, is to install the recommended improvements for the Mount Royal neighbourhood within the specified timeframe. The timeframe 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 signage will be completed short-term (1 to 2 years).
Major intersection reviews are based on the number of other locations to be reviewed citywide and the availability of funding. The timeline for review will be medium-term ( 3 to 5 years).

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

- Table 5-1: Traffic Calming Devices Cost Estimate
- Table 5-2: Traffic Control Signs Cost Estimate
- Table 5-3: Pedestrian Safety Signs Cost Estimate
- Table 5-4: Miscellaneous Signs Cost Estimate
- Table 5-5: Sidewalk Cost Estimate Total Cost Estimate
- Table 5-6: Total Cost Estimate

Table 5-1: Traffic Calming Devices Cost Estimate

| Location | Device | Cost Estimate |  | Time Frame |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Temporary | Permanent |  |
| Avenue W \& Rylston Road | Curb Extensions on south <br> side | $\$ 500$ | $\$ 90,000$ | 1 to 5 years (traffic <br> calming devices will <br> be installed |
| $23^{\text {rd }}$Street \& Montreal <br> Avenue | Remove all temporary <br> traffic calming | $\$ 250$ | NA |  |
| Edmonton Avenue near <br> $31^{\text {st }}$ Street | Speed Display Board | $\$ 0$ | $\$ 5,000$ | $\mathbf{\$ 9 5 , 0 0 0}$ |
| Totals | $\mathbf{\$ 7 5 0}$ |  |  |  |

Table 5-2: Traffic Control Signs Cost Estimate

| Location | Device | Number of <br> Signs | Cost <br> Estimate | Time Frame |
| :---: | :---: | :---: | :---: | :---: |
| Avenue W \& 29 ${ }^{\text {th }}$ Street | Stop Signs | 4 | $\$ 1,000$ |  |
| $29^{\text {th }}$ Street - intersections along bus <br> route (Avenue Q, Avenue R, Avenue <br> X, Avenue Y) | Stop Signs | 8 | $\$ 2,000$ |  |
| $23^{\text {rd }}$ Street \& Avenue R | Stop Signs | 2 | $\$ 500$ | 1 to 2 years |
| $23^{\text {rd }}$ Street \& Avenue T | Stop Signs | 4 | $\$ 1,000$ |  |

Table 5-3: Pedestrian Safety Signs Cost Estimate

| Location | Device | Cost Estimate | Time Frame |
| :---: | :---: | :---: | :---: |
| Avenue W \& Rylston Road | Zebra Crosswalk | \$500 | 1 to 2 years |
| Avenue T \& Rylston Road | Zebra Crosswalks | \$500 |  |
|  |  | \$1,000 |  |

Table 5-4: Miscellaneous Signs Cost Estimate

| Location | Device | Number of <br> Signs | Cost <br> Estimate | Time Frame |
| :---: | :---: | :---: | :---: | :---: |
| Avenue W \& Rylston Road | "No Parking" <br> sign | 1 | $\$ 250$ |  |
| Back lane south of Circle Drive <br> between 31st Street to pedestrian <br> tunnel | 20kph Speed <br> Signs | 2 | $\$ 500$ |  |
| Avenue W \& 23rd Street | Hazard Boards | 2 | $\$ 500$ | 1 to 2 years |
| Avenue P \& 23rd Street | Hazard Boards | 2 | $\$ 500$ |  |
| Totals |  |  |  |  |

Table 5-5: Sidewalk Cost Estimate Total Cost Estimate

| Location | Between | Length <br> (metres) | Cost <br> Estimate | Time Frame |
| :---: | :---: | :---: | :---: | :---: |
| Avenue W | $22^{\text {nd }}$Street to 23rd Street <br> (west side only) <br> $23^{\text {rd }}$ Street <br> Avenue P to Avenue Q | 82 | $\$ 28,700$ |  |
| $23^{\text {rd }}$ Street | Avenue Q \& Avenue W <br> (south side only) | 600 | $\$ 210,000$ | 5 years plus |
| Bedford Road | Avenue W \& Avenue T <br> (north side only) | 300 | $\$ 105,000$ |  |

Table 5-6: Total Cost Estimate

| Category | Signing \& Temporary Traffic <br> Calming (2016) | Permanent <br> (Beyond 2016) |
| :---: | :---: | :---: |
| Traffic Calming | $\$ 750$ | $\$ 95,000$ |
| Traffic Control Signs | $\$ 4,500$ | $\$ 0$ |
| Pedestrian Safety | $\$ 1,000$ | $\$ 0$ |
| Miscellaneous | $\$ 1,750$ | $\$ 0$ |
| Sidewalk | $\$ 0$ | $\$ 521,400$ |
|  | Totals | $\$ 8,000$ |

The total cost estimate for the signage and temporary traffic calming to be installed in 2016 is $\$ 8,000$. The total cost estimate for the installation of future permanent devices, including the active pedestrian corridor, and sidewalks, is $\mathbf{\$ 5 1 6 , 4 0 0}$.

Resulting from the plan development process, the recommended improvements, including the location, type of improvement, and schedule for implementation are summarized in Exhibit 5-1. The resulting recommended Mount Royal Neighbourhood Traffic Management Plan is illustrated in Table 5-7.


Table 5-7: Mount Royal Neighbourhood Recommended Improvements

| Item | Location | Recommendation | Reason |
| :---: | :---: | :---: | :---: |
| 1 | Avenue W \& $29^{\text {th }}$ Street | Four-way Stop Signs | Improve driver \& pedestrian safety |
| 2 | Avenue W \& Rylston Road | Curb Extensions \& Zebra Crosswalk on south side; parking restrictions on southwest corner | Reduce speed, improve pedestrian safety \& improve sightlines |
| 3 | Avenue W \& $23{ }^{\text {rd }}$ Street | Hazard Boards | Enhance visibility of stop signs |
| 4 | $29^{\text {th }}$ Street - intersections along bus route (Avenue $Q$, Avenue R, Avenue X, Avenue Y) | Stop Signs | Improve safety along bus route (as per Policy C07-007, stop signs are warranted along a transit route) |
| 5 | Avenue T \& Rylston Road | Zebra Crosswalks | Improve pedestrian safety in front of school |
| 6 | Avenue P \& $23{ }^{\text {rd }}$ Street | Hazard Boards | Enhance visibility of stop signs |
| 7 | $23^{\text {rd }}$ Street \& Avenue R | Stop Signs | Improve intersection safety |
| 8 | $23^{\text {rd }}$ Street \& Avenue T | Four-way Stop Signs | Improve intersection \& pedestrian safety |
| 9 | Back lane south of Circle Drive between $31^{\text {st }}$ Street to pedestrian tunnel | 20kph Speed Signs | Reduce speed |
| 10 | Edmonton Ave near 31 ${ }^{\text {st }}$ Street | Speed Display Board | Reduce Speed |
| 11 | $23^{\text {rd }}$ Street \& Montreal Avenue | Remove all temporary traffic calming | Direction of yield signs were changed in 2013 as part of the Blairmore Bikeway. Traffic calming not needed. |
| 12 | Avenue W-22 ${ }^{\text {nd }}$ Street to $23^{\text {rd }}$ Street | Sidewalk on west side | Improve pedestrian safety \& connectivity(connects to grocery store) |
| 13 | $23^{\text {rd }}$ Street - Avenue $P$ to Avenue Q | Sidewalk on both sides | Improve pedestrian safety \& connectivity (connects to school) |
| 14 | $23^{\text {rd }}$ Street between Avenue Q \& Avenue W | Sidewalk on south side | Improve pedestrian safety \& connectivity |
| 15 | Bedford Road between Avenue W \& Avenue T | Sidewalk on north side | Improve pedestrian safety \& connectivity (school route) |

APPENDIX A: PUBLIC CONSULTATION

# Mount Royal Neighbourhood <br> Traffic Review <br> Thursday, June 4, 2015, 7:00-9:00 P.M. <br> Mount Royal Collegiate 

## Facilitators:

- Mitch Riabko \& Kathy Dahl (Great Works Consulting)


## Agenda

- Welcome \& introductions
- Presentation from the Transportation Division
- Small group discussions
- Small group discussion - report back to large group
- Next Steps
- Question / Answers

Councillor Davies sends his regrets.
Presentation from Transportation Division - Mount Royal Neighbourhood Traffic Review (Presented by Justine Nyen - Traffic Engineer)

Presentation Outline:

- Neighbourhood Review Process
- Timeline for Mount Royal Review
- Sources of Information
- Concerns Received/Past Studies
- Description of Traffic Calming \& Pedestrian Safety Devices

Neighbourhood Review Process:

- August 2013 - New process; neighbourhood review vs issue by issue; eight neighbourhoods reviewed per year
- Mandate - Reduce \& calm traffic, improve safety within neighbourhoods
- 2014 - Varsity View, Nutana, Brevoort Park, Haultain, Holliston, City Park, Westmount, Hudson Bay Park, Caswell Hill
- 2015 - Mount Royal, Meadowgreen, Adelaide-Churchill, Montgomery Place, Confederation Park, Avalon, Greystone Heights, Lakeview

Timeline for Mount Royal Review:

- Stage 1 - Identify issues \& possible solutions through community consultation (June to fall 2015)
- Stage 2 - Develop a draft traffic plan (fall 2015)
- Stage 3 - Present draft traffic plan to community for feedback (fall 2015)
- Stage 4 - Implement the changes over time

Sources of Information:

- Past Studies (speed studies, traffic volumes counts, intersection reviews, pedestrian crossings)
- Collision Analysis
- Feedback from Public Consultation
- Traffic Counts \& Assessments

Concerns Received/Past Studies:

- Stop \& Yield Retrofit - Stop \& Yield Retrofit program began as a pilot project in City Park. Favourable results were indicated with an overall reduction in collisions therefore the program was expanded to other neighbourhoods. Yield signs installed (in an alternating pattern so a thoroughfare isn't created) in fall 2014 at all uncontrolled intersections.
- $22^{\text {nd }}$ Street - currently being reviewed to address pedestrian crossing safety; pedestrian activated crossings installed at Ave $R$ and Ave $M$; assess to determine effectiveness and next steps
- $29^{\text {th }}$ Street \& Avenue W - speeding on Avenue W north \& south of $29^{\text {th }} \mathrm{St}$; dropping off kids at daycare (sometimes after 5pm so 30kph limit is not in effect) nearly getting hit by cars speeding by; hit \& runs; skewed intersection; dangerous; parking is obstructing view; children walking to and from school; pedestrians crossing to access bus stops.
- Possible solutions: make the area a reduced speed zone; road narrowing; speed bumps; close off Edmonton Ave; install four-way stop at $29^{\text {th }}$ Street or traffic signals; install three-way stop at $31^{\text {st }}$ Street
- Four-way stop (last study was in 2012; didn't warrant four-way stop); stop signs aren't to be used as speed control devices;
- Speed study on Avenue W between $29^{\text {th }}$ St \& $30^{\text {th }}$ St in June 2013 indicated acceptable range; traffic calming not recommended; peak time info sent to police for enforcement; temporary speed display board was installed
- Expanded school zone to include Ave W \& $29^{\text {th }}$ St intersection; implement parking restrictions to improve visibility
- Installed 50kph further north where it turns into Edmonton Ave to ensure motorists are aware of speed limit
- $29^{\text {th }}$ Street - speeding around curve where it turns into Vancouver Ave
- $29^{\text {th }}$ Street \& Avenue R - collision occurred; speeding on $29^{\text {th }}$ Street; change yield signs to stop; enforcement; installed crosswalk
- $29^{\text {th }}$ St \& Ave T - speeding; ignoring yield signs; collisions; install four-way stop or speed bumps; or four-way stop a block or two away to slow down traffic on that stretch
- $23^{\text {rd }}$ Street - Blairmore Bikeway installed in 2013 currently being assessed; speeding between Avenue P \& Witney Avenue; beside No Frills parking lot and Shopper's Drug Mart; many elderly walking to and from area; install speed humps; reduce speed limit; enforcement
- $23^{\text {rd }}$ Street \& Witney Avenue - Four-way stop
- $23^{\text {rd }}$ Street - speeding in front of St. Gerard School (between Ottawa \& Montreal Avenue)
- Witney Avenue - parking issues across from Royal West Campus (near Rylston Road); students taking up on-street parking \& blocking driveways; speeding

Traffic Calming Devices (Examples of devices used in Saskatoon):

1. Speed Display Boards
2. Raised Median Island - narrows road; provides center refuge for pedestrians
3. Curb Extensions - narrows road
4. Roundabouts
5. Diverter - used to address high traffic volumes
6. Right-in/right-out island - used to address high traffic volumes
7. Directional Closure - restrict movements onto the street from one direction
8. Raised median through intersection - restrict movements
9. Full closure

Pedestrian Devices:

1. Standard crosswalk
2. Zebra crosswalk (striped pavement markings)
3. Active pedestrian corridor (flashing yellow lights)
4. Pedestrian-activated signals

## Presentation from Saskatoon Police Services

- Saskatoon is growing; more enforcement
- Tools allow us to judge speeds - radar, laser. However there are limits, trees blocking etc.
- Important to keep speeds down in residential area. In Mount Royal lots of times it's taking a drive through the area, because it's difficult to set up. Most calls we get are on $22^{\text {nd }}$ Street and Avenue P.
- Goal is to reduce accidents, NOT give out tickets.
- Issues with residents contesting tickets in court. Have to make sure we have all the information.
- Saskatoon Police Services: 306-975-8300 OR 306-975-8068 to report a traffic complaint or a concern.


## Q\&A for Saskatoon Police Services:

Resident: Avenue W is no parking zone. Who's responsible for parking enforcement?
SPS: Commissionaires will provide parking enforcement (306-975-8344).
Resident: Collision stats. Who has those?
City: We're provided collision stats through SGI. These are reported collisions only. This information will be provided at the follow-up meeting.

Resident: Is daycare a challenge for enforcement? 7:30-8:30am and 5pm there should be enforcement for speeding.

SPS: Need to find a good place to set up, can be a challenge. If car is visible people slow down.

Resident: Park on $30^{\text {th }}$ Street to set up for enforcement on Avenue W.
Resident: Police used to sit further down on Avenue W, before Edmonton Avenue.
Resident: I walk to with my kid to daycare. $29^{\text {th }}$ Street \& Avenue W is dangerous to cross.

## Small Group Discussions

- Breakout into small groups to discuss traffic concerns in Mount Royal and potential solutions

Group 1: Justine Nyen (City facilitator)

- $23^{\text {rd }}$ Street \& Avenue T - not in favour of yield signs that were changed due to Blairmore Bikeway; change back to east-west stop; Avenue $T$ is a main road so direction of the signs should be changed.
- $23^{\text {rd }}$ Street bike route - not satisfied with signs changed (direction); no bikes use the route in the winter; issues with graders and temporary curbing; Avenue $P$ traffic calming narrows the road and restricts to one lane, blocking traffic that's coming northbound from $22^{\text {nd }}$ Street; sign on the median is always getting hit
- Witney Avenue - the driveway at Shoppers Drug Mart is too close to $22^{\text {nd }}$ Street; drivers have to cross 4 lanes of traffic in a short distance to get back onto $22^{\text {nd }}$ Street
- Avenue P - the $7-11$ driveway is too close to $22^{\text {nd }}$ Street; drivers have to cross 4 lanes of traffic in a short distance to get back onto $22^{\text {nd }}$ Street
- $29^{\text {th }}$ Street \& Avenue W - skewed; visibility issues; parking in restricted areas and not enforced; no one stops for pedestrians; gets backed up on $29^{\text {th }}$ Street (westbound) because when driver at front takes up entire lane (no space to go right); trees obstruct driver's view; should be a pickup and drop off area for the daycare; install flashing lights for the school zone; solutions (if four-way stop isn't warranted): trim trees to improve visibility, install curb extension on northeast corner of Ave W to restrict parking, improve sightlines, and narrow road to reduce speeds. This also won't restrict northbound movements.
- Avenue W \& Rylston Road - install pedestrian device and curb extensions to help with parking
- Avenue W \& Rusholme Road - install curb extensions to restrict parking; bus is parked in no parking zone on Ave W north of Rusholme
- Trees obstructing driver's view:
- Ave T\& $23^{\text {rd }} \mathrm{St}$
- Ave T \& Bedford Rd
- Ave P \& $31^{\text {st }}$ St
- Edmonton Avenue - speeding; enforcement would help
- Increase in traffic $-33^{\text {rd }}$ Street->Ave W->22 $2^{\text {nd }}$ Street to avoid $22^{\text {nd }}$ Street and Circle Drive intersection because there's no access to downtown.
- In favour of pedestrian flashing lights instead of full stop (pedestrian activated signal)

Group 2: Mariniel Flores (City facilitator)

- $29^{\text {th }}$ Street \& Avenue W - restrict parking at northeast corner; skewed intersection so it's difficult to see; four-way stop needed; zebra crosswalks (north and south)
- $23^{\text {rd }}$ Street \& Avenue W - Median keep getting hit; zebra crosswalk; improvements for pedestrian safety (many pedestrians)
- Ave W \& Rylston Rd - daycare or active pedestrian corridor/signals
- Hedge trimming obstructs sidewalk on west side of Ave W between Rusholme Rd \& Bedford Rd
- Tree blocking stop signs
- $22^{\text {nd }}$ St \& Ave W - advance green light for westbound and eastbound left; many pedestrians there as well
- Witney Ave \& $23^{\text {rd }} \mathrm{St}$ - median keeps getting hit
- Edmonton Ave - speeding concerns around curve
- $29^{\text {th }}$ St between Ave W \& Ave X - paving needed; big gravel hole being dug up
- Ave W, as a whole, should be studied. Perhaps active transportation corridor
- $23^{\text {rd }}$ St \& Ave M - remove mini roundabout

Group 3: Jay Magus (City facilitator)

1. Why are schools too close to the main road?
2. Montreal Avenue between Bedford Rd \& Rylston Rd - speeding
3. $29^{\text {th }}$ Street \& Avenue T-Pedestrian crossing safety at intersection
4. $29^{\text {th }}$ Street \& Avenue T - Change yield to stop signs
5. $22^{\text {nd }}$ St \& Avenue P - Why are there not left turn arrows?
6. $29^{\text {th }}$ Street west of Avenue W - speeding; buses
7. Avenue W north of $29^{\text {th }}$ Street on east side - Expand no parking further to north
8. Avenue $W \& 29^{\text {th }}$ St - Continue of pavement
9. $22^{\text {nd }}$ St \& Witney Avenue - Eastbound left turn, into the queue of folks turning right
10. Avenue W \& Rylston Rd (in front of school) - Parent pickup and drop off zone with the skills training center
11.Avenue W \& $2{ }^{\text {th }} \mathrm{St}-$ four-way stop
11. Avenue W \& Avenue $X$ - Zebra stripes
12. Avenue W \& $30^{\text {th }}$ Street - Raised median is not a solution
13. Avenue W \& $29^{\text {th }} \mathrm{St}$ - Volume of traffic
14. Avenue $W$ to $30^{\text {th }}$ Street - Shortcutting
15. Eliminate school zone
16. Avenue W in front of Mount Royal Collegiate - Can't see
17. Avenue W \& $29^{\text {th }} \mathrm{St}$ - Pedestrian safety
$19.22^{\text {nd }} \mathrm{St}$ between Avenue S \& Avenue T - Pedestrian close to travel zone 20. Ave C \& $29^{\text {th }} \mathrm{St}$
18. Speed reader was placed too close to school zone last fall

## Next Steps

1. Continue monitoring traffic issues in your neighbourhood
2. Mail-in or email comments no later than July $4 / 15$
3. Additional public input via City on-line Community Engagement webpage no later than July $4 / 15$
http://shapingsaskatoon.ca/discussions/mount-royal-neighbourhood-traffic-reviewmeeting
4. Traffic count data collection - spring/summer 2015
5. City review of public input and data collected from traffic studies and prepare draft Traffic Plan
6. Follow-up public input meeting to provide input on draft
7. Determine revisions and finalize Traffic Plan
8. Present Traffic Plan to City Council for approval

## Question \& Answer

Resident: It's approximately a year to implementing?
City: Must be approved by City Council. We've began implementing recommendations from last year's reviews. Those round 2 meetings wrapped up last December. We're hoping for the same timeline.

Resident: Cycling. Is this included in this review?
City: Our group looks at cycling issues. There's also the Active Transportation Plan coming soon. It looks at the entire cycling network - connections, new neighbourhoods, retrofitting in established neighbourhoods.

Resident: Who pays for this? Will taxes go up?
City: Goes through budget process.
Resident: Are cyclists being counted on $23^{\text {rd }}$ Street?
City: This is currently being assessed. Cyclists will be counted.
Resident: It's not safe to bike to downtown. Even on $23^{\text {rd }}$ Street.
City: Go to Shaping Saskatoon, search "Active Transportation" and share those comments (http://shapingsaskatoon.ca/projects/active-transportation-plan)

## List of Representatives

Mitch Riabko, Kathy Dahl - Great Works Consulting, Facilitators
Mount Royal Neighbourhood Traffic Review Minutes - June 4, 2015

Jay Magus - City of Saskatoon, Transportation \& Utilities, Engineering Manager Justine Nyen - City of Saskatoon, Transportation \& Utilities, Transportation Engineer Mariniel Flores - City of Saskatoon, Transportation \& Utilities, Transportation Engineer Mark Emmons - City of Saskatoon, Planning \& Development, Planner - Neighbourhood Planning

# Mount Royal Neighbourhood <br> Traffic Review <br> Tuesday, November 17, 2015, 7:00-9:00 P.M. <br> Mount Royal Collegiate 

## Facilitators:

- Mitch Riabko \& Kathy Dahl (Great Works Consulting)


## Agenda

- Welcome \& introductions
- Presentation from the Transportation Division
- Small group discussions
- Small group discussion - report back to large group
- Next Steps
- Question / Answers

Presentation from Transportation Division - Mount Royal Neighbourhood Traffic Review (Presented by Justine Nyen - Transportation Engineer)

Presentation Outline:

- Neighbourhood Traffic Management Program
- How We Got Here
- What We Heard
- What We Did
- What We Propose

Neighbourhood Traffic Management Program:

- Address neighbourhood traffic issues:
- Speeding concerns
- Short-cutting concerns
- Pedestrian safety
- Intersection safety
- August 2013 - changes to program
- Neighbourhood-wide review
- More community / stakeholder feedback
- Efficient use of staff resources

How We Got Here:

- June 2015 - Initial Traffic Meeting
- June to November 2015 - gather feedback, conduct traffic studies, collect data, develop traffic plan
- November 2015 - Follow Up Traffic Meeting - display proposed traffic plan and gather feedback

What We Heard:
A. Speeding/Traffic Volumes:

- $29^{\text {th }}$ St
- Avenue W
- $23^{\text {rd }}$ Street
- Edmonton Ave
- Avenue T (in front of school)
B. Pedestrian Safety:
- Avenue W \& $29^{\text {th }}$ St
- Avenue W \& Rylston Rd
- $23^{\text {rd }} \mathrm{St}$
C. Intersection Safety:
- Avenue W \& 29 ${ }^{\text {th }}$ St - difficult to cross or turn left from $29^{\text {th }}$ St, visibility issues, skewed intersection
- Avenue W \& $23^{\text {rd }}$ St
- Witney Ave \& 23 rd St
- Ave T \& $23^{\text {rd }}$ St
- $22^{\text {nd }}$ St at the signalized intersections (Ave W, Ave P \& Witney Ave) - request for left turn arrow phase
D. Parking:
- Witney Ave (Royal West Campus) - blocking driveways, parking too close to intersections
- Avenue W - parents picking up/dropping off children at daycare

What We Did:

- Collected Data:
- Past studies
- Comments from initial meeting
- Resident responses (phone calls, emails, letters)
- Recorded comments from Shaping Saskatoon discussions
- 6 Intersection / Pedestrian counts
- 11 - 7 day traffic count ( 24 hour) \& Average Speed measurements
- Collision history
- Field Reviews
- Assessed the Issues
- Generated proposed recommendations

What We Propose:

- Zebra Crosswalks
- Hazard Boards
- Stop Signs (and four-way stops)
- Parking Restrictions
- Curb Extensions
- Raised Median Islands
- Sidewalks
- Enforcement (speeding)
- Saskatoon Police Services: 306-975-8300 OR 306-975-8068 to report a traffic complaint or a concern.


## Small Group Discussions

- Breakout into small groups to discuss traffic concerns in Mount Royal and potential solutions

Group 1: Mariniel Flores (City facilitator)

- Item \#1 - Median islands at Edmonton Ave \& $31^{\text {st }}$ St - group was in neutral support; potential for photo radar or speed board
- $23^{\text {rd }}$ St \& Ave T - bushes obstructing driver's view and parking; install four-way stop or change orientation of stop signs
- Item \#12 - Curb extensions on $23^{\text {rd }}$ St in front of St. Gerard School - group was in neutral support
- Item \#13 - Sidewalks on $23^{\text {rd }} \mathrm{St}$ - install on one side along entire section between Ave P and Ave W
- $23^{\text {rd }}$ St - collisions at Ave R; speeding concerns
- Ave W near Rylston Rd - disabled parking needs to be reviewed
- Bedford Rd between Ave W and Ave T - no sidewalks at all; need sidewalk at least on one side
- Tree trimming needed along alleys and at Rylston Rd and Ave S
- Potholes along Witney Ave (Ave P is good) and Ave T - need to repair/repave and Ave X, Ave H

Group 2: Shirley Matt (City facilitator)

- Item \#1 - Median islands at Edmonton Ave - Edmonton Ave is not wide enough; issues with younger drivers; ok as long as there is enough space for big trucks; maintenance issues with islands (during winter); drivers fly around corner; install four-way stop
- Item \#2 - Four-way stop with median islands at Ave W \& $29^{\text {th }} \mathrm{St}$ - median islands are more of a hazard
- Item \#3 - Ave W \& Rylston Rd median islands, zebra crosswalk \& parking restrictions - not in support of islands; may have issues with daycare; prefer curb extensions at corner instead (on school side)
- Item \#8 - zebra crosswalk, curb extension \& median island at $29^{\text {th }}$ St \& Ave T - not in support of curbs or islands
- Item \#11 - median island \& crosswalk at Ave T \& 23rd St - not in support of median island; hedges blocking view
- Item \#12 - curb extension on $23^{\text {rd }}$ St in front of St. Gerard School - split opinion
- General comments about traffic calming (ie. median island \& curb extensions):
- Maintenance issues
- Level of service - snow removal, street sweeping
- Ave W \& Rusholme Rd - remove pedestrian actuated signal and replace with active pedestrian corridor (ie. flashing yellow light) or four-way stop; move pedestrian actuated signal to Ave W \& Rylston Rd for daycare

Group 3: Justine Nyen (City facilitator)

- Item \#1 - median island at Edmonton Ave \& $31^{\text {st }}$ St - not sure if this will work; likely not enough to reduce speed
- Item \#8 - curb extension \& median island at $29^{\text {th }}$ St \& Ave T - devices might not be necessary; concerns with turning movements (most people turn here)
- Item \#9 - stop signs at $29^{\text {th }}$ St \& Ave T - not necessary; most drivers are turning/slowing down anyways
- Item \#10 - stop signs at Ave T \& Bedford Rd - change direction of yield signs instead
- Item \#11 - median island \& crosswalk at 23rd St \& Ave T -signs not necessary; change to yield signs stop (direction of signs changed in 2012 for bike route)
- Back lane south of Circle Dr between $31^{\text {st }} \mathrm{St}$ to pedestrian tunnel - speeding \& increased traffic volumes; install 20kph speed signs, police enforcement needed
- General comments about traffic calming:
- Locations might not be necessary. Consider pros \& cons
- Focus on school sites and walking routes to schools


## Next Steps

1. Mail-in or email comments no later than Dec 17/15
2. Additional public input via City on-line Community Engagement webpage no later than Dec 17/15
http://shapingsaskatoon.ca/discussions/mount-royal-neighbourhood-traffic-review-meeting
3. Additional consultation if required
4. Present traffic plan to City Council for approval
5. What if City Council approves? Implementation begins. Signs and temporary traffic calming will be installed as early as next spring (2016)
6. What if I don't agree? Request time to speak at City Council meeting

## Q\&A

No questions received.

## List of Representatives

Mitch Riabko, Kathy Dahl - Great Works Consulting, Facilitators
Justine Nyen, Shirley Matt, Mariniel Flores - City of Saskatoon, Transportation \& Utilities

APPENDIX B: TRAFFIC DATA COLLECTION



APPENDIX C: ALL WAY STOP ASSESSMENTS

## All-way Stop Assessment (Policy C07-007 - Traffic Control - Use of Stop \& Yield Signs)

Step 1:
The following conditions must be met for all-way stop control to be considered:
i) The combined volume of traffic entering the intersection over the five peak hour periods from the minor street must be at least $25 \%$ of the total volume for a three-way stop control, and at least $35 \%$ of the total volume for a four-way stop control.
ii) There can be no all-way stop control and traffic signal within 200 metres of the proposed intersection being considered for all-way stop control on either of the intersecting streets.

| Location | Condition 1: \% of <br> Traffic from minor <br> street | Condition 2: Traffic Signals <br> or all-way stop within <br> 200m | All-Way Stop Warrant |
| :---: | :---: | :---: | :---: |
| $29^{\text {th }}$ Street \& Avenue T | $12 \%$ (no) | no |  |
| Bedford Road \& Avenue T | $29 \%$ (no) | no | Conditions NOT met. |
| $23^{\text {rd }}$ Street \& Avenue R | $15 \%$ (no) | no |  |
| $23^{\text {rd }}$ Street \& Avenue T | $41 \%$ (yes) | no | Conditions met. |

## Step 2:

Provided the above criteria are met, the following conditions, singly or in combination, may warrant the installation of all-way stop signs:
i) When five or more collisions are reported in the last twelve month period and are of a type susceptible to correction by an all-way stop control.
ii) When the total number of vehicles entering the intersection from all approaches averages at least 600 per hour for the peak hour or the total intersection entering volume exceeds 6,000 vehicles per day.
iii) The average delay per vehicle to the minor street traffic must be 30 seconds or greater during the peak hour.
iv) As an interim measure to control traffic while arrangements are being made for the installation of traffic signals.

| Location | Criteria 1: 5 or <br> more collisions in <br> most recent 12 <br> months | Criteria 2: total number of vehicles <br> entering the intersection from all <br> approaches averages at least 600 <br> per hour for the peak hour | Criteria 3: total <br> intersection entering <br> volume exceeds 6,000 <br> vehicles per day | Results |
| :---: | :---: | :---: | :---: | :---: |
| $23^{\text {rd } \text { Street \& }}$Avenue T | 5 - Condition met | 185 - Condition NOT met | $2,060-$ Condition NOT <br> met | Four-way stop <br> warranted based <br> on collisions. |
|  <br> $29^{\text {th }}$ Street | $4-$ Condition NOT <br> met | 714 - Condition met | 7,300 - Condition met | Further <br> consideration due <br> to high collisions. |

Traffic volume criteria meets the warrant requirements for a four-way stop. As previously identified, traffic from the minor street is slightly below the requirement (i.e. 35\%). However, based on requests received during the public consultation, collision analysis, and traffic volumes a four-way stop at Avenue W \& $29^{\text {th }}$ Street is recommended. Installation of an unwarranted all-way stop may lead to issues such as queuing traffic on the major roadway, or driver non-compliance. The location will be monitored after installation of the four-way stop to determine effectiveness.

APPENDIX D: PEDESTRIAN DEVICE ASSESSMENTS

## Active Pedestrian Corridor Warrant:

29 ${ }^{\text {th }}$ St \& Ave X:
"Time


7:00

7:15

7:30

7:45

8:00 114114

| $8: 15$ | 138 | 252 | 3 | 3 | 3 | 3 | 756 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $8: 30$ | 157 | 295 | 4 | 4 | 4 | 7 | 2,065 |
| $8: 45$ | 148 | 305 | 3 | 3 | 3 | 7 | 2,135 |
| $9: 00$ |  | 148 |  |  | 3 | 444 |  |
| $9: 15$ |  |  |  |  |  |  |  |
| $9: 30$ |  |  |  |  |  |  |  |

9:45

| AM Totals | 557 |  | 10 |  | 10 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $11: 30$ | 95 |  | 3 | 3 | 3 |  |  |
| $11: 45$ | 106 | 201 |  |  |  | 3 | 603 |
| $12: 00$ | 121 | 227 | 1 | 1 | 1 | 1 | 227 |
| $12: 15$ | 127 | 248 | 2 | 2 | 2 | 3 | 744 |
| $12: 30$ | 114 | 241 |  |  |  | 2 | 482 |


| 12:45 | 97 | 211 | 5 |  | 5 | 5 | 5 | 1,055 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 13:00 | 110 | 207 |  |  |  |  | 5 | 1,035 |
| 13:15 | 107 | 217 |  |  |  |  |  |  |
| Noon T | otals | 877 |  | 11 |  | 11 |  |  |
| 14:00 |  |  |  |  |  |  |  |  |
| 14:15 |  |  |  |  |  |  |  |  |
| 14:30 |  |  |  |  |  |  |  |  |
| 14:45 |  |  |  |  |  |  |  |  |
| 15:00 | 166 | 166 | 2 |  | 2 | 2 | 2 | 332 |
| 15:15 | 214 | 380 | 1 |  | 1 | 1 | 3 | 1,140 |
| 15:30 | 217 | 431 | 1 |  | 1 | 1 | 2 | 862 |
| 15:45 | 205 | 422 | 3 |  | 3 | 3 | 4 | 1,688 |
| 16:00 | 188 | 393 |  |  |  |  | 3 | 1,179 |
| 16:15 | 187 | 375 | 1 |  | 1 | 1 | 1 | 375 |
| 16:30 | 163 | 350 |  |  |  |  | 1 | 350 |
| 16:45 | 176 | 339 |  |  |  |  |  |  |
| 17:00 |  | 176 |  |  |  |  |  |  |
| 17:15 |  |  |  |  |  |  |  |  |
| 17:30 |  |  |  |  |  |  |  |  |
| 17:45 |  |  |  |  |  |  |  |  |
| 18:00 |  |  |  |  |  |  |  |  |
| 18:15 |  |  |  |  |  |  |  |  |
| 18:30 |  |  |  |  |  |  |  |  |
| 18:45 |  |  |  |  |  |  |  |  |

19:15

19:30

19:45

20:00

20:15

20:30

20:45

PM Totals 1,51
8
8

Totals 2,950 29

100\%
100\%

| North Crosswalk $=$ | 10 |  |
| :--- | :--- | :--- |
| South Crosswalk $=$ | 19 | $\lll$ install crosswalk |

on this side of the int.

SUMMARY

Total Warranted PC Points: or / period

Highest PC point value: 2,135 at

Average PC point value: 1,031

No. of periods warranted:

Ave W \& Rylston Rd:
"Time


| Noon Totals |  | 607 | 1 |  | 42 | 3 | 46 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14:00 |  |  |  |  |  |  |  |  |  |
| 14:15 |  |  |  |  |  |  |  |  |  |
| 14:30 |  |  |  |  |  |  |  |  |  |
| 14:45 |  |  |  |  |  |  |  |  |  |
| 15:00 | 97 | 97 |  | 2 |  | 2 | 1 | 1 | 97 |
| 15:15 | 100 | 197 |  | 9 |  | 9 | 4.5 | 5.5 | 1,084 |
| 15:30 | 134 | 234 | 7 | 14 |  | 21 | 11.69 | 16.19 | 3,788 |
| 15:45 | 127 | 261 |  | 1 |  | 1 | 0.5 | 12.19 | 3,182 |
| 16:00 | 106 | 233 |  | 2 |  | 2 | 1 | 1.5 | 350 |
| 16:15 | 115 | 221 |  | 4 |  | 4 | 2 | 3 | 663 |
| 16:30 | 123 | 238 |  | 1 |  | 1 | 0.5 | 2.5 | 595 |
| 16:45 | 122 | 245 |  | 1 |  | 1 | 0.5 | 1 | 245 |
| 17:00 |  | 122 |  |  |  |  |  | 0.5 | 61 |
| 17:15 |  |  |  |  |  |  |  |  |  |
| 17:30 |  |  |  |  |  |  |  |  |  |
| 17:45 |  |  |  |  |  |  |  |  |  |
| 18:00 |  |  |  |  |  |  |  |  |  |
| 18:15 |  |  |  |  |  |  |  |  |  |
| 18:30 |  |  |  |  |  |  |  |  |  |
| 18:45 |  |  |  |  |  |  |  |  |  |
| 19:00 |  |  |  |  |  |  |  |  |  |
| 19:15 |  |  |  |  |  |  |  |  |  |
| 19:30 |  |  |  |  |  |  |  |  |  |

20:00

20:15

20:30

20:45

| PM To |  | 924 |  | 7 | 34 |  | 41 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Totals | 1,955 | 8 | 9 | 100 | 3 | 120 |  |  |
|  |  | 7\% | 8\% | 83\% | 3\% | 100\% |  |  |
|  |  |  |  | North Crosswalk = |  |  | 65 | <<< install crosswalk |

on this side of the int.

$$
\text { South Crosswalk = } 55
$$

SUMMARY

Total Warranted PC Points: or / period

Highest PC point value: 3,987 at

Average PC point value: 1,735

No. of periods warranted:

29 ${ }^{\text {th }}$ St \& Ave R:
"Time
(15 minute intervals)" Vehicle Counts Pedestrian Counts
P.C. Periods Points of

Total Both Sides
Factored Counts
Warrant Wrnt'd Wrnt'd


| 14:30 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14:45 |  |  |  |  |  |  |  |
| 15:00 | 55 | 55 |  |  |  |  |  |
| 15:15 | 77 | 132 | 3 | 3 | 3 | 3 | 396 |
| 15:30 | 86 | 163 | 1 | 1 | 1 | 4 | 652 |
| 15:45 | 77 | 163 | 1 | 1 | 1 | 2 | 326 |
| 16:00 | 75 | 152 |  |  |  | 1 | 152 |
| 16:15 | 65 | 140 | 2 | 2 | 2 | 2 | 280 |
| 16:30 | 64 | 129 |  |  |  | 2 | 258 |
| 16:45 | 87 | 151 | 1 | 1 | 1 | 1 | 151 |
| 17:00 |  | 87 |  |  |  | 1 | 87 |
| 17:15 |  |  |  |  |  |  |  |
| 17:30 |  |  |  |  |  |  |  |
| 17:45 |  |  |  |  |  |  |  |
| 18:00 |  |  |  |  |  |  |  |
| 18:15 |  |  |  |  |  |  |  |
| 18:30 |  |  |  |  |  |  |  |
| 18:45 |  |  |  |  |  |  |  |
| 19:00 |  |  |  |  |  |  |  |
| 19:15 |  |  |  |  |  |  |  |
| 19:30 |  |  |  |  |  |  |  |
| 19:45 |  |  |  |  |  |  |  |
| 20:00 |  |  |  |  |  |  |  |
| 20:15 |  |  |  |  |  |  |  |
| 20:30 |  |  |  |  |  |  |  |


| PM Totals | 586 |  | 8 |
| :--- | :--- | :--- | :--- |
| Totals | 1,206 | 13 | 8 |
|  |  | $100 \%$ | 13 |

West Crosswalk =
8 <<< install crosswalk
on this side of the int.
East Crosswalk $=\quad 5$

SUMMARY
Total Warranted PC Points:
or
/ period

Highest PC point value: 652 at

Average PC point value: 228

No. of periods warranted:

## Avenue W \& 29 ${ }^{\text {th }} \mathbf{S t}$ :

"Time
(15 minute intervals)" Vehicle Counts Pedestrian Counts
P.C. Periods Points of

Total Both Sides Factored Counts
Warrant Wrnt'd Wrnt'd

15 min. 30 min.Child Teen Adult Senior / Impaired Total 15 min . 30 min . Points (1=Yes) Periods

7:15
7:30
7:45
8:00 114114

| $8: 15$ | 138 | 252 | 3 |
| :--- | :--- | :--- | :--- |
| $8: 30$ | 157 | 295 | 4 |
| $8: 45$ | 148 | 305 | 3 |
| $9: 00$ |  | 148 |  |

9:15
9:30
9:45
$\left.\begin{array}{llllllll}\text { AM Totals } & 557 & & 10 & & 10 & & \\ \text { 11:30 } & 95 & & 3 & & 3 & 3 & \\ \text { 11:45 } & 106 & 201 & & & & & 3\end{array}\right) 603$

| 15:00 | 166 | 166 | 2 |  | 2 | 2 | 2 | 332 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15:15 | 214 | 380 | 1 |  | 1 | 1 | 3 | 1,140 |
| 15:30 | 217 | 431 | 1 |  | 1 | 1 | 2 | 862 |
| 15:45 | 205 | 422 | 3 |  | 3 | 3 | 4 | 1,688 |
| 16:00 | 188 | 393 |  |  |  |  | 3 | 1,179 |
| 16:15 | 187 | 375 | 1 |  | 1 | 1 | 1 | 375 |
| 16:30 | 163 | 350 |  |  |  |  | 1 | 350 |
| 16:45 | 176 | 339 |  |  |  |  |  |  |
| 17:00 |  | 176 |  |  |  |  |  |  |
| 17:15 |  |  |  |  |  |  |  |  |
| 17:30 |  |  |  |  |  |  |  |  |
| 17:45 |  |  |  |  |  |  |  |  |
| 18:00 |  |  |  |  |  |  |  |  |
| 18:15 |  |  |  |  |  |  |  |  |
| 18:30 |  |  |  |  |  |  |  |  |
| 18:45 |  |  |  |  |  |  |  |  |
| 19:00 |  |  |  |  |  |  |  |  |
| 19:15 |  |  |  |  |  |  |  |  |
| 19:30 |  |  |  |  |  |  |  |  |
| 19:45 |  |  |  |  |  |  |  |  |
| 20:00 |  |  |  |  |  |  |  |  |
| 20:15 |  |  |  |  |  |  |  |  |
| 20:30 |  |  |  |  |  |  |  |  |
| 20:45 |  |  |  |  |  |  |  |  |
| PM To |  | 1,516 |  | 8 |  | 8 |  |  |

Totals 2,950 $29 \quad 29$
$100 \%$ 100\%

North Crosswalk $=\quad 10$

South Crosswalk =
19 <<< install crosswalk on this side of the int.

SUMMARY

Total Warranted PC Points: or / period

Highest PC point value: 2,135 at

Average PC point value: 1,031

No. of periods warranted:

Ave T \& Bedford Rd:
"Time
(15 minute intervals)" Vehicle Counts Pedestrian Counts
P.C. Periods Points of

Total Both Sides Factored Counts
Warrant Wrnt'd Wrnt'd

15 min .30 min .Child Teen Adult Senior / Impaired Total 15 min . 30 min . Points (1=Yes) Periods

7:00

7:15

7:30

| 7:45 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8:00 | 4 | 4 |  |  |  |  |  |  |
| 8:15 | 8 | 12 |  |  |  |  |  |  |
| 8:30 | 4 | 12 |  |  |  |  |  |  |
| 8:45 | 10 | 14 |  |  |  |  |  |  |
| 9:00 |  | 10 |  |  |  |  |  |  |
| 9:15 |  |  |  |  |  |  |  |  |
| 9:30 |  |  |  |  |  |  |  |  |
| 9:45 |  |  |  |  |  |  |  |  |
| AM Totals |  | 26 |  |  |  |  |  |  |
| 11:30 | 6 |  |  |  |  |  |  |  |
| 11:45 | 10 | 16 | 1 |  | 1 | 1 | 1 | 16 |
| 12:00 | 9 | 19 |  |  |  |  | 1 | 19 |
| 12:15 | 12 | 21 | 1 |  | 1 | 1 | 1 | 21 |
| 12:30 | 11 | 23 |  |  |  |  | 1 | 23 |
| 12:45 | 18 | 29 | 1 |  | 1 | 1 | 1 | 29 |
| 13:00 | 13 | 31 |  |  |  |  | 1 | 31 |
| 13:15 | 12 | 25 |  |  |  |  |  |  |
| Noon | otals | 91 |  | 3 |  | 3 |  |  |
| 14:00 |  |  |  |  |  |  |  |  |
| 14:15 |  |  |  |  |  |  |  |  |
| 14:30 |  |  |  |  |  |  |  |  |
| 14:45 |  |  |  |  |  |  |  |  |
| 15:00 | 15 | 15 |  |  |  |  |  |  |
| 15:15 | 14 | 29 | 2 |  | 2 | 2 | 2 | 58 |


| 15:30 | 17 | 31 |  |  |  | 2 | 62 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15:45 | 12 | 29 | 1 | 1 | 1 | 1 | 29 |
| 16:00 | 11 | 23 |  |  |  | 1 | 23 |
| 16:15 | 9 | 20 | 1 | 1 | 1 | 1 | 20 |
| 16:30 | 13 | 22 |  |  |  | 1 | 22 |
| 16:45 | 19 | 32 |  |  |  |  |  |
| 17:00 |  | 19 |  |  |  |  |  |
| 17:15 |  |  |  |  |  |  |  |
| 17:30 |  |  |  |  |  |  |  |
| 17:45 |  |  |  |  |  |  |  |
| 18:00 |  |  |  |  |  |  |  |
| 18:15 |  |  |  |  |  |  |  |
| 18:30 |  |  |  |  |  |  |  |
| 18:45 |  |  |  |  |  |  |  |
| 19:00 |  |  |  |  |  |  |  |
| 19:15 |  |  |  |  |  |  |  |
| 19:30 |  |  |  |  |  |  |  |
| 19:45 |  |  |  |  |  |  |  |
| 20:00 |  |  |  |  |  |  |  |
| 20:15 |  |  |  |  |  |  |  |
| 20:30 |  |  |  |  |  |  |  |
| 20:45 |  |  |  |  |  |  |  |
| PM Tota |  | 110 | 4 |  | 4 |  |  |
| Totals | 227 |  | 7 | 7 |  |  |  |
|  |  |  | 100\% |  |  |  |  |

West Crosswalk =
East Crosswalk =
6
on this side of the int.

SUMMARY

Total Warranted PC Points: or / period

Highest PC point value: 62 at

Average PC point value: 24

No. of periods warranted:

## $29^{\text {th }}$ St $\&$ Ave T:

"Time
(15 minute intervals)" Vehicle Counts Pedestrian Counts
P.C. Periods Points of

Total Both Sides Factored Counts
Warrant Wrnt'd Wrnt'd

15 min .30 min .Child Teen Adult Senior / Impaired Total 15 min . 30 min .
Points (1=Yes) Periods

7:00

7:15

7:30

7:45
$\begin{array}{llllllll}8: 00 & 59 & 59 & 1 & 1 & 1 & 1 & 59\end{array}$



East Crosswalk $=\quad 6$

SUMMARY

Total Warranted PC Points: or / period

Highest PC point value: 1,085 at

Average PC point value: 301

No. of periods warranted:

## Pedestrian Actuated Signal Warrant:

## $29^{\text {th }}$ St $\&$ Ave X:

1. Lanes Priority Points:

$$
\begin{aligned}
& L=2 \text { lanes }=\text { number of lanes. } \\
& \text { LANF }=0.0 \quad \text { points }=(L-2) \times 3.6 \text { to a max of } 15 \text { points, urban } x \text {-section only. }
\end{aligned}
$$

2. Median Priority Points:

$$
\text { MEDF }=6.0 \quad \text { points }=\text { indicating there is no physical median here } .
$$

3. Speed Priority Points:
$S=50 \mathrm{kph}=$ speed limit or 85 th percentile speed.

SPDF = 6.7 points $=(S-30) / 3$ to a maximum of 10 points.
4. Pedestrian Protection Location:
$D=400 \mathrm{~m}=$ distance from study location to nearest protected crosswalk.

LOCF $=15.0$ points $=(\mathrm{D}-200) / 13.3$ to a maximum of 15 points.

Actual value $=$
15.03759398 points.
5. Pedestrian/Vehicle Volume Priority Points:

$$
\begin{array}{ll}
H=5.0 & =(\text { hours }) \text { duration of counting period. } \\
\text { Ps }=29.0 & =\text { total number of children, teenagers, seniors and/or impaired }
\end{array}
$$

counted.
$\mathrm{Pa}=0.0 \quad=$ total number of adults counted.

Pw $=43.5=$ weighted average of pedestrians crossing the main street.

Pcm = 8.7 = weighted average hourly pedestrian volume crossing the
main street.

$$
\begin{aligned}
& V=2950.0 \quad=\text { volume of traffic passing through the crossing(s). } \\
& \text { Vam }=590.0 \quad \text { = average hourly volume of traffic passing through the }
\end{aligned}
$$ crossing(s).

$$
\text { VOLF }=10.3 \text { points }=\text { Vam } \times P \mathrm{Pcm} / 500
$$

6. Satisfaction of Installation Criteria:

$$
\begin{aligned}
& \text { SUMF }=(\text { LANF }+ \text { MEDF }+ \text { SPDF }+ \text { LOCF }+ \text { VOLF }) \\
& \text { SUMF }= \\
& 38 \text { points }
\end{aligned}
$$

(P.A. Signal Warrant Points)

The total of the warrant points is less than 100 indicating that a pedestrian actuated signal is NOT warranted.

## Ave W \& Rylston Rd:

1. Lanes Priority Points:
```
L=2 lanes = number of lanes.
```

LANF $=0.0$ points $=(L-2) \times 3.6$ to a max of 15 points, urban $x$-section only.
2. Median Priority Points:

```
MEDF = 6.0 points = indicating there is no physical median here.
```

3. Speed Priority Points:
$S=50 \mathrm{kph}=$ speed limit or 85th percentile speed.

SPDF $=6.7$ points $=(S-30) / 3$ to a maximum of 10 points.
4. Pedestrian Protection Location:

```
    D = 190 m = distance from study location to nearest protected crosswalk.
```

    LOCF \(=0.0\) points \(=(D-200) / 13.3\) to a maximum of 15 points.
    5. Pedestrian/Vehicle Volume Priority Points:
$H=5.0 \quad=$ ( hours ) duration of counting period.

Ps $=20.0=$ total number of children, teenagers, seniors and/or impaired counted.

$$
\mathrm{Pa}=100.0 \quad=\text { total number of adults counted. }
$$

$$
\mathrm{Pw}=130.0 \quad=\text { weighted average of pedestrians crossing the main street. }
$$

$$
\text { Pcm }=26.0 \quad=\text { weighted average hourly pedestrian volume crossing the }
$$

main street.

$$
\begin{array}{ll}
V=1955.0 & =\text { volume of traffic passing through the crossing(s). } \\
\text { Vam = 391.0 } & =\text { average hourly volume of traffic passing through the }
\end{array}
$$ crossing(s).

$$
\text { VOLF }=20.3 \text { points }=\text { Vam } \times \mathrm{Pcm} / 500
$$

6. Satisfaction of Installation Criteria:
```
SUMF = (LANF + MEDF + SPDF + LOCF + VOLF )
SUMF = 33 points
(P.A. Signal Warrant Points)
```

The total of the warrant points is less than 100 indicating that a pedestrian actuated signal is NOT warranted.

## $29^{\text {th }}$ St $\&$ Ave R:

1. Lanes Priority Points:
```
L=2 lanes = number of lanes.
```

```
LANF = 0.0 points = (L-2) x 3.6 to a max of 15 points, urban x-section only.
```

2. Median Priority Points:
```
MEDF = 6.0 points = indicating there is no physical median here.
```

3. Speed Priority Points:
```
S = 50 kph = speed limit or 85th percentile speed.
SPDF = 6.7 points = (S-30)/3 to a maximum of 10 points.
```

4. Pedestrian Protection Location:
```
D = 230 m = distance from study location to nearest protected crosswalk.
LOCF = 2.3 points = (D-200)/13.3 to a maximum of 15 points.
```

5. Pedestrian/Vehicle Volume Priority Points:

$$
\begin{array}{ll}
H=5.0 & =(\text { hours }) \text { duration of counting period } \\
\text { Ps }=13.0 & =\text { total number of children, teenagers, seniors and/or impaired }
\end{array}
$$ counted.

$$
\mathrm{Pa}=0.0 \quad=\text { total number of adults counted } .
$$

$$
\begin{array}{ll}
\mathrm{Pw}=19.5 & =\text { weighted average of pedestrians crossing the main street. } \\
\mathrm{Pcm}=3.9 & =\text { weighted average hourly pedestrian volume crossing the }
\end{array}
$$

main street.

$$
\begin{array}{ll}
V=1206.0 & =\text { volume of traffic passing through the crossing(s). } \\
\text { Vam }=241.2 & =\text { average hourly volume of traffic passing through the }
\end{array}
$$

crossing(s).

```
VOLF = 1.9 points = Vam x Pcm / 500
```

6. Satisfaction of Installation Criteria:

SUMF $=\quad($ LANF + MEDF + SPDF + LOCF + VOLF $)$

SUMF $=17$ points
(P.A. Signal Warrant Points)

The total of the warrant points is less than 100 indicating that a pedestrian actuated signal is NOT warranted.

Ave W \& 29 ${ }^{\text {th }}$ St:

1. Lanes Priority Points:
$\mathrm{L}=2$ lanes $=$ number of lanes.

LANF $=0.0$ points $=(L-2) \times 3.6$ to a max of 15 points, urban $x$-section only.
2. Median Priority Points:

$$
\text { MEDF }=\quad 6.0 \quad \text { points }=\text { indicating there is no physical median here. }
$$

3. Speed Priority Points:
```
S = 50 kph = speed limit or 85th percentile speed.
SPDF = 6.7 points = (S-30) / 3 to a maximum of 10 points.
```

4. Pedestrian Protection Location:
$D=400 \mathrm{~m}=$ distance from study location to nearest protected crosswalk.

LOCF $=15.0$ points $=(D-200) / 13.3$ to a maximum of 15 points.

Actual value $=\quad 15.03759398$ points.
5. Pedestrian/Vehicle Volume Priority Points:
$H=5.0 \quad=$ ( hours ) duration of counting period.

Ps $=29.0=$ total number of children, teenagers, seniors and/or impaired counted.

```
\(\mathrm{Pa}=0.0 \quad=\) total number of adults counted.
    Pw \(=43.5 \quad=\) weighted average of pedestrians crossing the main street.
```

$$
\text { Pcm = } 8.7 \quad=\text { weighted average hourly pedestrian volume crossing the }
$$

main street.

```
                    V = 2950.0 = volume of traffic passing through the crossing(s).
                    Vam = 590.0 = average hourly volume of traffic passing through the
crossing(s).
```

VOLF $=10.3$ points $=$ Vam $\times$ Pcm $/ 500$
6. Satisfaction of Installation Criteria:

```
SUMF = (LANF + MEDF + SPDF + LOCF + VOLF )
SUMF = 38 points
(P.A. Signal Warrant Points)
```

The total of the warrant points is less than 100 indicating that a pedestrian actuated signal is NOT warranted.

## Ave T \& Bedford Rd:

1. Lanes Priority Points:
$\mathrm{L}=2$ lanes $=$ number of lanes.

LANF $=0.0$ points $=(\mathrm{L}-2) \times 3.6$ to a max of 15 points, urban $x$-section only.
2. Median Priority Points:

```
MEDF = 6.0 points = indicating there is no physical median here.
```

3. Speed Priority Points:
```
S = 50 kph = speed limit or 85th percentile speed.
SPDF = 6.7 points = (S-30)/3 to a maximum of 10 points.
```

4. Pedestrian Protection Location:
$D=1,000 \mathrm{~m} \quad=$ distance from study location to nearest protected crosswalk.

LOCF $=15.0$ points $=(\mathrm{D}-200) / 13.3$ to a maximum of 15 points.

Actual value $=$
60.15037594 points.
5. Pedestrian/Vehicle Volume Priority Points:

$$
\begin{array}{ll}
H=5.0 & =(\text { hours }) \text { duration of counting period. } \\
\text { Ps }=7.0 & =\text { total number of children, teenagers, seniors and/or impaired }
\end{array}
$$

counted.

$$
\begin{array}{ll}
\mathrm{Pa}=0.0 & =\text { total number of adults counted. } \\
\mathrm{Pw}=10.5 & =\text { weighted average of pedestrians crossing the main street. } \\
\mathrm{Pcm}=2.1 & =\text { weighted average hourly pedestrian volume crossing the }
\end{array}
$$ main street.

$$
\begin{array}{ll}
V=227.0 & =\text { volume of traffic passing through the crossing(s). } \\
\text { Vam }=45.4 & =\text { average hourly volume of traffic passing through the }
\end{array}
$$

crossing(s).

$$
\text { VOLF }=0.2 \text { points }=\text { Vam } \times \mathrm{Pcm} / 500
$$

6. Satisfaction of Installation Criteria:

$$
\begin{array}{ll}
\text { SUMF }= & (\text { LANF }+ \text { MEDF }+ \text { SPDF }+ \text { LOCF }+ \text { VOLF }) \\
\text { SUMF }= & 28 \quad \text { points }
\end{array}
$$

(P.A. Signal Warrant Points)

The total of the warrant points is less than 100 indicating that a pedestrian actuated signal is NOT warranted.

## 29 ${ }^{\text {th }}$ St $\&$ Ave $\mathrm{T}:$

1. Lanes Priority Points:
$\mathrm{L}=2$ lanes $=$ number of lanes.

LANF $=0.0$ points $=(L-2) \times 3.6$ to a max of 15 points, urban $x$-section only.
2. Median Priority Points:

MEDF $=6.0$ points $=$ indicating there is no physical median here.
3. Speed Priority Points:

$$
\begin{aligned}
& \text { S }=50 \quad \mathrm{kph} \quad=\text { speed limit or } 85 \text { th percentile speed. } \\
& \text { SPDF }=6.7 \quad \text { points }=(S-30) / 3 \text { to a maximum of } 10 \text { points. }
\end{aligned}
$$

4. Pedestrian Protection Location:
$D=1,000 \mathrm{~m} \quad=$ distance from study location to nearest protected crosswalk.

LOCF $=15.0$ points $=(\mathrm{D}-200) / 13.3$ to a maximum of 15 points.

Actual value $=\quad 60.15037594$ points.
5. Pedestrian/Vehicle Volume Priority Points:

$$
\begin{array}{ll}
H=5.0 & =(\text { hours }) \text { duration of counting period. } \\
\text { Ps }=20.0 & =\text { total number of children, teenagers, seniors and/or impaired }
\end{array}
$$ counted.

$$
\mathrm{Pa}=0.0 \quad=\text { total number of adults counted } .
$$

$$
\text { Pw }=30.0 \quad=\text { weighted average of pedestrians crossing the main street. }
$$

$$
\text { Pcm }=6.0 \quad=\text { weighted average hourly pedestrian volume crossing the }
$$ main street.

$$
\mathrm{V}=1156.0 \quad=\text { volume of traffic passing through the crossing(s). }
$$

$$
\text { Vam }=231.2 \quad=\text { average hourly volume of traffic passing through the }
$$

crossing(s).

$$
\text { VOLF }=2.8 \quad \text { points }=\text { Vam } \times \mathrm{Pcm} / 500
$$

6. Satisfaction of Installation Criteria:


The total of the warrant points is less than 100 indicating that a pedestrian actuated signal is NOT warranted.

APPENDIX E: COLLISION ANALYSIS

| Street 1 | Street 2 | Ugrid | All Collisions (2009- $2013)$ | $\begin{gathered} \text { All } \\ \text { collisions - } \\ 2013 \end{gathered}$ | Right Angle, Left Turn, Right Turn (2009-2013) | Right Angle, Left Turn, Right Turn 2013 only | Collector or Arterial | Average $(2009-2013)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ave P | 23rd St | E7-50 | 19 | 4 | 11 | 3 | yes | 4 |
| Ave W | 29th St | D6-14 | 18 | 4 | 11 | 3 | yes | 4 |
| Ave P | 29th St | E6-27 | 15 | 4 | 11 | 3 | yes | 3 |
| Ave P | Rusholme Rd | E7-54 | 14 | 2 | 6 | 1 | yes | 3 |
| Ave W | Rusholme Rd | D7-33 | 11 | 0 | 8 | 0 | yes | 2 |
| Bedford Rd | Ave TN | D7-22 | 11 | 4 | 9 | 4 | no | 2 |
| 23rd St | Ave QN | D7-3 | 10 | 3 | 7 | 3 | no | 2 |
| 23 rd St | Ave TN | D7-20 | 9 | 1 | 9 | 1 | no | 2 |
| Ave P | Bedford Rd | E7-51 | 8 | 0 | 3 | 0 | yes | 2 |
| Ave W | 23rd St | D7-31 | 8 | 2 | 3 | 1 | yes | 2 |
| 23rd St | Ave V N | D7-38 | 6 | 2 | 5 | 2 | no | 1 |
| 23rd St | Ave SN | D7-15 | 5 | 0 | 1 | 0 | no | 1 |
| $\begin{aligned} & \text { Rusholme } \\ & \text { Rd } \\ & \hline \end{aligned}$ | Ave R N | D7-11 | 5 | 1 | 3 | 0 | no | 1 |
| 23rd St | Ave UN | D7-26 | 4 | 2 | 3 | 1 | no | 1 |
| 29th St | Ave TN | D6-6 | 4 | 1 | 1 | 0 | yes | 1 |
| Ave W | Bedford Rd | D7-61 | 4 | 0 | 0 | 0 | yes | 1 |
| Bedford Rd | Ave UN | D7-55 | 4 | 0 | 4 | 0 | no | 1 |
| $\begin{aligned} & \hline \text { Rusholme } \\ & \text { Rd } \\ & \hline \end{aligned}$ | Ave Y N | C7-7 | 4 | 2 | 2 | 1 | no | 1 |
| Rylston Rd | Ave QN | D7-7 | 4 | 1 | 3 | 1 | no | 1 |
| 23rd St | Ave R N | D7-9 | 3 | 3 | 3 | 3 | no | 1 |
| Ave P | 31st St | E6-30 | 3 | 0 | 1 | 0 | yes | 1 |
| McMillan Ave | 29th St | E6-41 | 3 | 0 | 1 | 0 | yes | 1 |
| Rusholme Rd | Ave QN | D7-6 | 3 | 0 | 1 | 0 | no | 1 |
| Rylston Rd | Ave XN | C7-47 | 3 | 2 | 2 | 2 | no | 1 |
| Witney Ave | 29th St | C6-4 | 3 | 1 | 1 | 0 | no | 1 |
| Witney Ave | Rusholme Rd | C7-10 | 3 | 1 | 1 | 1 | no | 1 |
| 30th St | Ave TN | D6-39 | 2 | 0 | 0 | 0 | no | 0 |
| Ave W | Rylston Rd | D7-51 | 2 | 1 | 1 | 1 | yes | 0 |
| Bedford Rd | Ave V N | D7-50 | 2 | 1 | 2 | 1 | no | 0 |
| Bedford Rd | Ave Q N | D7-4 | 2 | 1 | 1 | 1 | no | 0 |
| Edmonton Ave | 31st St | D6-24 | 2 | 1 | 0 | 0 | yes | 0 |
| McMillan Ave | 31st St | E6-51 | 2 | 0 | 1 | 0 | no | 0 |
| Witney Ave | Bedford Rd | C7-28 | 2 | 0 | 2 | 0 | no | 0 |
| Witney Ave | 23rd St | C7-14 | 2 | 0 | 1 | 0 | no | 0 |
| 23rd St | Vancouver Ave N | C7-26 | 1 | 1 | 0 | 0 | no | 0 |
| 23rd St | Ave XN | C7-65 | 1 | 0 | 1 | 0 | no | 0 |
| 29th St | Ave XN | C6-11 | 1 | 0 | 1 | 0 | no | 0 |
| 29th St | Ave UN | D6-27 | 1 | 0 | 0 | 0 | yes | 0 |
| 29th St | Ave SN | D6-9 | 1 | 0 | 1 | 0 | yes | 0 |
| 30th St | Ave V N | D6-47 | 1 | 0 | 1 | 0 | no | 0 |
| 31st St | Trotter Cres | E6-50 | 1 | 0 | 0 | 0 | no | 0 |
| Ave P | Rylston Rd | E7-56 | 1 | 0 | 0 | 0 | yes | 0 |
| Bedford Rd | Ave Y N | C7-29 | 1 | 0 | 0 | 0 | no | 0 |
| Bedford Rd | Ave R N | D7-10 | 1 | 0 | 1 | 0 | no | 0 |
| Ottawa Ave | Winnipeg Ave | C7-72 | 1 | 0 | 0 | 0 | no | 0 |
| $\begin{aligned} & \text { Rusholme } \\ & \text { Rd } \end{aligned}$ | Vancouver Ave N | C7-91 | 1 | 0 | 0 | 0 | no | 0 |
| $\begin{aligned} & \text { Rusholme } \\ & \text { Rd } \end{aligned}$ | Montreal Ave N | C7-86 | 1 | 1 | 0 | 0 | no | 0 |


| Rusholme Rd | Ave V N | D7-79 | 1 | 0 | 0 | 0 | no | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rusholme Rd | Ave T N | D7-24 | 1 | 0 | 0 | 0 | no | 0 |
| $\begin{aligned} & \text { Rusholme } \\ & \text { Rd } \end{aligned}$ | Ave S N | D7-18 | 1 | 0 | 1 | 0 | no | 0 |
| Rylston Rd | Ave S N | D7-56 | 1 | 0 | 1 | 0 | no | 0 |
| Rylston Rd | Ave R N | D7-12 | 1 | 0 | 1 | 0 | no | 0 |
| Winnipeg Ave | Ottawa Ave N | C7-72 | 1 | 0 | 0 | 0 | no | 0 |
| 23 rd St | Winnipeg Ave | C7-59 | 0 | 0 | 0 | 0 | no | 0 |
| 23rd St | Ottawa Ave N | C7-64 | 0 | 0 | 0 | 0 | no | 0 |
| 23rd St | Montreal Ave N | C7-53 | 0 | 0 | 0 | 0 | no | 0 |
| 23rd St | Ave YN | C7-6 | 0 | 0 | 0 | 0 | no | 0 |
| 29th St | Ave YN | C6-28 | 0 | 0 | 0 | 0 | no | 0 |
| 29th St | Ave V N | D6-7 | 0 | 0 | 0 | 0 | yes | 0 |
| 29th St | Ave R N | D6-3 | 0 | 0 | 0 | 0 | yes | 0 |
| 29th St | Ave QN | D6-2 | 0 | 0 | 0 | 0 | yes | 0 |
| 29th St | Ave ON | E6-88 | 0 | 0 | 0 | 0 | yes | 0 |
| 30th St | Ave UN | D6-22 | 0 | 0 | 0 | 0 | no | 0 |
| 30th St | Ave SN | D6-37 | 0 | 0 | 0 | 0 | no | 0 |
| 30th St | Ave R N | D6-55 | 0 | 0 | 0 | 0 | no | 0 |
| 31st St | Ave V N | D6-23 | 0 | 0 | 0 | 0 | no | 0 |
| 31st St | Ave UN | D6-57 | 0 | 0 | 0 | 0 | no | 0 |
| 31st St | Ave TN | D6-49 | 0 | 0 | 0 | 0 | no | 0 |
| 31st St | Ave SN | D6-56 | 0 | 0 | 0 | 0 | no | 0 |
| 31st St | Ave R N | D6-5 | 0 | 0 | 0 | 0 | no | 0 |
| Ave W | Ave XN | D6-54 | 0 | 0 | 0 | 0 | yes | 0 |
| Ave W | 30th St | D6-32 | 0 | 0 | 0 | 0 | yes | 0 |
| Bedford Rd | Ottawa Ave N | C7-18 | 0 | 0 | 0 | 0 | no | 0 |
| Bedford Rd | Montreal Ave N | C7-80 | 0 | 0 | 0 | 0 | no | 0 |
| Bedford Rd | Ave XN | C7-3 | 0 | 0 | 0 | 0 | no | 0 |
| Bedford Rd | Ave S N | D7-16 | 0 | 0 | 0 | 0 | no | 0 |
| Ottawa Ave | Bedford Rd | C7-18 | 0 | 0 | 0 | 0 | no | 0 |
| Rusholme Rd | Ottawa Ave N | C7-19 | 0 | 0 | 0 | 0 | no | 0 |
| Rusholme Rd | Ave X N | C7-4 | 0 | 0 | 0 | 0 | no | 0 |
| $\begin{aligned} & \text { Rusholme } \\ & \text { Rd } \end{aligned}$ | Ave UN | D7-73 | 0 | 0 | 0 | 0 | no | 0 |
| Rylston Rd | Ave Y N | C7-83 | 0 | 0 | 0 | 0 | no | 0 |
| Witney Ave | Rylston Rd | C7-67 | 0 | 0 | 0 | 0 | no | 0 |

APPENDIX F: DECISION MATRIX

## Decision Matrix - Recommendations proposed at November 17, 2015 meeting

| Item | Location | Recommendation | Reason | Group 1 | Group 2 | Group 3 | Recommendation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $\underset{31 s t ~ S t}{\text { Edmonton Ave }}$ | Median islands | Reduce Speed | neutral; consider photo radar or speed board | Edmonton Ave isn't wide enough heard that younger drivers are driving over; install Four-way stop; people fly around corner; maintenance issues with islands during winter | not sure if this will be effective | Removed. Install speed display board instead. |
| 2 | Avenue $\mathrm{W} \& 29$ th St | Four-way stop with median islands and additional stop signs on Avenue W | Improve safety for drivers crossing or turning onto Avenue W; improve pedestrian safety; reduce speed; median islands will ensure the stop signs are visible to drivers on Avenue W |  | median islands are more of a hazard |  | Install Four-way stop signs. Remove median islands. |
| 3 | Avenue W \& Rylston Rd | Median islands; zebra crosswalk on south leg; parking restrictions on southwest corner | Reduce speed, improve pedestrian safety \& improve sightlines |  | not in support of median islands; daycare at corner may have issues; prefer curb extensions at corners (south side of school side) |  | Changed to curb extensions on the south side \& zebra crosswalk on the south leg. |
| 4 | Avenue W \& 23rd St | Add hazard boards to stop signs | Enhance visibility of stop signs |  |  |  | Carried. |
| 5 | $\begin{gathered} \hline \text { Avenue } W-22 n d \\ \text { St to } 23 \text { rd St } \\ \hline \end{gathered}$ | Sidewalk (west side) | Improve pedestrian safety \& connectivity(connects to grocery store) |  |  |  | Carried. |
| 6 | 29th St - <br> intersections along bus route(Ave Q, Ave R, Ave X, Ave Y) | Stop signs | Improve safety along bus route (as per Policy C07-007, stop signs are warranted along a transit route) |  |  |  | Carried. |
| 7 | Avenue T \& Rylston Rd | Zebra crosswalks | Improve pedestrian safety in front of school |  |  |  | Carried. |
| 8 | 29th St \& Ave T | Zebra crosswalks, curb extension \& median island | Reduce speed \& improve pedestrian safety | 5 in favour; 1 person not sure about curb extensions | not in support of median islands or curb extensions | devices might not be needed; concerns turning around them | Removed. |
| 9 | 29th St \& Ave T | Stop signs | Improve intersection safety |  |  | not necessary; drivers are turning so they slow down regardless | Removed. |
| 10 | Ave T \& Bedford Rd | Stop signs | Improve intersection safety |  |  | change direction of yield signs | Removed. $71 \%$ of total traffic is on Bedford Rd; therefore keep yield signs as is (facing lower volume street - Ave T) |
| 11 | 23 rd St \& Ave T | Median island \& standard crosswalk (west leg) | Reduce speed \& improve pedestrian safety | bush obstruction and parking; <br> Four-way stop; change orientation of signs | not in support of median island | change to yield signs, stop signs not necessary; median island not necessary | Removed. Collision analysis and turning movement count indicated Four-way stop is warranted. Add to list of recommendations. |
| 12 | 23rd St in front of St. Gerard School | Move northwest curb extension to 23rd St side; remove northeast curb extension on Montreal Ave | Reduce speed \& improve pedestrian safety (direction of yield signs changed in 2012 due to 23 rd St bike route) | neutral | split opinions - depends on maintenance; hedges blocking view at south |  | Remove all temporary traffic calming. Site check indicated hedges were already trimmed. |
| 13 | $\begin{gathered} \text { 23rd St - Ave P to } \\ \text { Ave Q } \\ \hline \end{gathered}$ | Sidewalk (both sides) | Improve pedestrian safety \& connectivity (connects to school) |  |  |  | Carried. |
| 14 | $\begin{gathered} \text { Avenue P \& 23rd } \\ S t \end{gathered}$ | Add hazard boards to stop signs | Enhance visibility of stop signs |  |  |  | Carried. |

Decision Matrix - Additional Issues raised at November 17, 2015 meeting

| Item | Location | Concern | Decision |
| :---: | :---: | :---: | :---: |
| 1 | 23rd St \& Ave R | collisions | Collision analysis indicated three <br> reported collisions within most recent <br> 12 months (all right angle). Upgrade <br> yield signs to stop signs. |
| 2 | 23rd St between Ave <br> P \& Ave W | install sidewalk on one <br> side; speeding | Sidewalk already recommended <br> between Ave P \& Ave Q on both sides. <br> Add sidewalk between Ave Q to Ave W <br> (additional 540m - south side only); <br> speed study indicated 47.9kph. No <br> further recommendations. |
| 3 | Ave W near Rylston <br> Rd | Disabled parking not <br> needed | Verified this is no longer required. <br> Request sent to sign shop to remove. |
| 4 | Bedford Rd between <br> Ave W \& Ave T | no sidewalks; need <br> sidewalk on at least one <br> side | Connects to school. Install sidewalk on <br> nerth side to connect to existing <br> sidewalk on north side between Ave T <br> and Ave R (270m - north side only). |
| 5 | Rylston Rd \& Avenue <br> S | Tree trimming <br> Site check determined adequate <br> sightlines. |  |
| 6 | Witney Ave, Avenue <br> T, Avenue X, Avenue <br> H | potholes | Forwarded information to Public Works <br> for further consideration. |
| 7 | Ave W \& Rusholme <br> Rd | replace pedestrian signal <br> with active pedestrian <br> corridor | Will be reviewed under Pedestrian <br> Device Assessments (city wide). |
| 8 | Ave W \& Rylston Rd | install pedestrian signal <br> for daycare | Pedestrian device not warranted (33 <br> points for the pedestrian activated <br> signal) |
| 9 | Back lane south of <br> Circle Dr between <br> 31 st St to pedestrian <br> tunnel |  <br> increased traffic; install <br> 20kph sign; <br> enforcement | Install 20kph speed signs |

