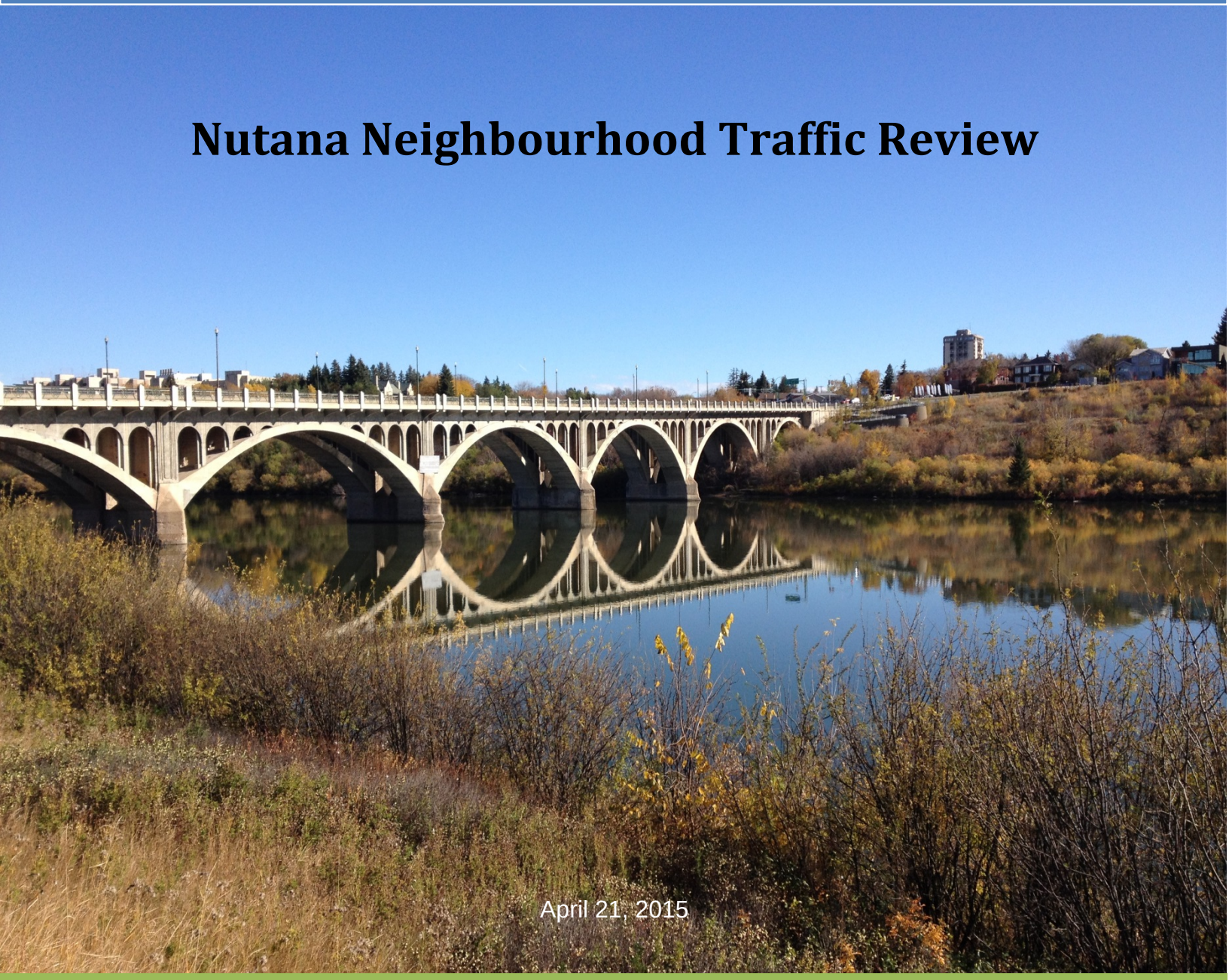
Attachment 1

City of Saskatoon

Nutana Neighbourhood Traffic Review



April 21, 2015

Transportation & Utilities Department

Acknowledgements

The completion of this review would not be possible without the contribution of the following organizations and individuals:

- Nutana residents
- Nutana Community Association
- Broadway Business Improvement District
- Saskatoon Police Service
- Saskatoon Light & Power
- Saskatoon Fire Department
- City of Saskatoon Environmental Services
- City of Saskatoon Transit
- City of Saskatoon Transportation
- Great Works Consulting
- Councillor Charlie Clark

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 October of 2013 to identify traffic concerns and potential solutions within the Nutana 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 September 2014. The meeting did not generate consensus on all the issues, therefore the Administration re-visited several specific issues, revised the Traffic Management Plan, and presented the plan to the community at an additional follow-up meeting in January 2015.

A summary of recommended improvements for the Nutana 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 Nutana Traffic Management Plan is illustrated in **Exhibit ES-1**.

Table ES-1: Nutana Neighbourhood Recommended Improvements

Location	Recommended Improvement	Time Frame
Dufferin Avenue & 9th Street	Stop signs	1 to 2 years
Dufferin Avenue & 10th Street	Stop signs	
Eastlake Avenue & 10th Street	Stop signs	
Eastlake Avenue & Main Street	4-way stop	
Broadway Avenue	Extend School Zone	
Clarence Avenue & 14th Street	Zebra crosswalk & enhance pedestrian signs	
Saskatchewan Crescent East & McPherson Avenue	Enhance pedestrian signs & parking restrictions	
Saskatchewan Crescent West & 8th Street West	Zebra crosswalks	
Eastlake Avenue & 11th Street	Zebra crosswalks	
Saskatchewan Crescent West between Idylwyld Crescent & 8th Street West	Curb extension & midblock crossing	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
12th Street & Lansdowne Avenue	Median island & parking restrictions	
8th Street West & Poplar Crescent	Median island, curb extension & zebra crosswalk	
Temperance Street / Lansdowne Avenue / 14th Street	Roadway realignment; 14th Street closure; standard pedestrian crosswalks; yield sign; stop sign; parking restrictions	
9th Street & Idylwyld Drive / Lorne Avenue	Directional closure	
9th Street & McPherson Avenue	Remove temporary roundabout	
Dufferin Avenue & 11th Street	Stop signs; permanent curb extension (northwest corner)	1 to 5 years
Clarence Avenue & 11th Street	Active pedestrian corridor	
Broadway Avenue & 9th Street	Pedestrian-activated signal	
Broadway Avenue	Chirping' sound to indicate crossings at intersections where traffic signals are present	1 to 5 years (will be included as part of Traffic Operations budget)
Various locations	Parking enforcement	ongoing
Saskatchewan Crescent between Cherry Street and 8th Street	Install speed display board in summer	1 to 2 years

City of Saskatoon

NUTANA TRAFFIC PLAN

Exhibit ES-1

ITEM	LOCATION	PROPOSED MEASURE	TIME FRAME
1	Dufferin Ave & 9th St	Stop Signs	1 to 2 years
2	Dufferin Ave & 10th St	Stop Signs	1 to 2 years
3	Eastlake Ave & 10th St	Stop Signs	1 to 2 years
4	Eastlake Ave & Main St	4-way Stop	1 to 2 years
5	Broadway Ave	Extend School Zone	1 to 2 years
6	Clarence Ave & 14th St	Zebra crosswalk & enhance pedestrian signs	1 to 2 years
7	Saskatchewan Cres East & McPherson Ave	Enhance pedestrian signs & parking restrictions	1 to 2 years
8	Saskatchewan Cres West & 8th Street West	Zebra crosswalks	1 to 2 years
9	Eastlake Ave & 11th St	Zebra crosswalks	1 to 2 years
10	Saskatchewan Cres West between Idylwyld Cres & 8th St West	Curb extensions & midblock crossing	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
11	12th St & Lansdowne Ave	Median island & parking restictions	
12	8th St West & Poplar Cres	Median island & parking restrictions	
13	Temperance St Lansdowne Ave 14th St	Roadway realignment; 14th Street closure; standard pedestrian crosswalks; yield sign; stop sign; parking restrictions	
14	9th Street & Idylwyld Dr/Lorne Ave	Directional Closure	
15	9th Street McPherson Ave	Remove temporary roundabout	

ITEM	LOCATION	PROPOSED MEASURE	TIME FRAME
16	Dufferin Ave & 11th St	Stop signs; permanent curb extension(northwest corner)	1 to 5 years
17	Clarence Ave & 11th St	Active pedestrian corridor	1 to 5 years
18	Broadway Ave & 9th St	Pedestrian activated signal	1 to 5 years
19	Saskatchewan Crescent (near Rotary Park)	Temporary Speed Display Board	1 year
	Broadway Ave	Chirping sound to indicate crossings at intersections where traffic signals are present	1 to 5 years (will be included as part of Traffic Operations budget)

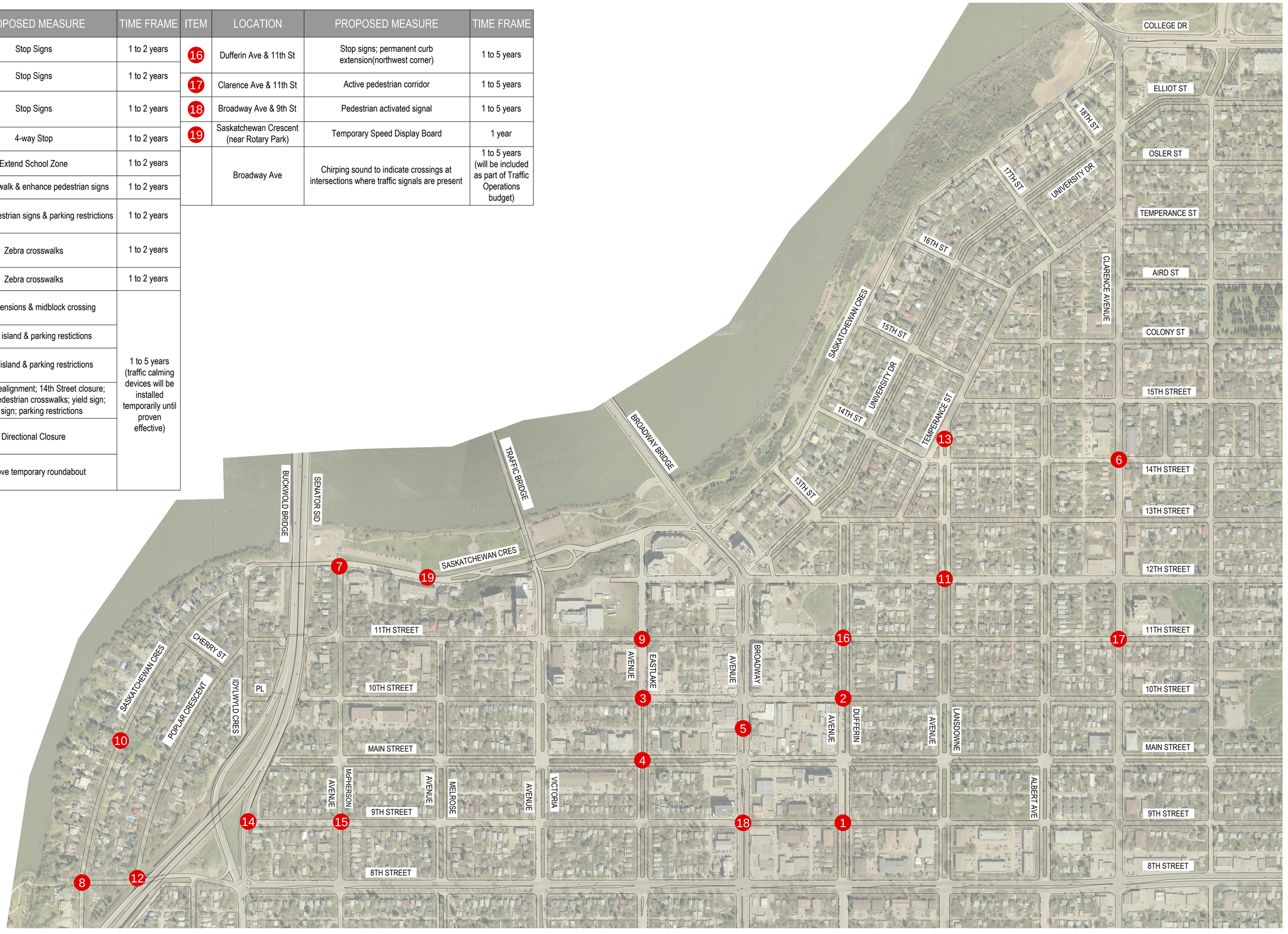


TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF EXHIBITS

1. Introduction

The purpose of this project was to develop a Traffic Management Plan for the Nutana neighbourhood following the implementation procedure outlined in the *City of Saskatoon Traffic Calming Guidelines and Tools* adopted by City Council in August 2013.

The Nutana neighbourhood is located on the east side of the South Saskatchewan River and is bound by the river to the north and west, Clarence Avenue to the east, and 8th Street to the south. The area use is mostly residential, with commercial along Broadway Avenue, 8th Street, and segments of Victoria Avenue. Two schools are located on Broadway Avenue (Victoria Elementary School and Oskayak High School) and a third school, Nutana Collegiate, is located on 11th Street. There are also a number of parks in the neighbourhood, including Cosmopolitan Park, Idylwyld Park, Massey Park, Poplar Park, Chief Darcy Bear Park, and Rotary Park.

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).

2. Identifying Issues, Concerns, & Possible Solutions

A public consultation began in October 2013 to identify traffic concerns within the neighbourhood. At the meeting, residents were given the opportunity to express their concerns and suggest possible solutions.

The following pages summarize the concerns and suggested solutions identified during the initial consultation with the neighbourhood residents.

CONCERN 1 – SPEEDING AND SHORTCUTTING

Shortcutting occurs when non-local traffic passes through the neighbourhood on local streets which are designed and intended for low volumes of traffic. In the case of Nutana, the arterial streets (8th Street, Clarence Avenue, and Broadway Avenue) and collector streets (Victoria Avenue, Saskatchewan Crescent, and 12th Street) 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:

- 8th Street – too congested causing speeding / shortcutting onto adjacent roadways; speeding between Coy Avenue & Poplar Crescent
- 9th Street - speeding/shortcutting (especially near Idylwyld Drive and Dufferin Avenue and near condos on corner of Clarence Avenue); existing temporary roundabout at McPherson Avenue causes confusion, is too wide for intersection, and needs to be beautified
- 10th Street & 11th Street – shortcutting / speeding (especially between Broadway Avenue & Eastlake Avenue)
- 11th Street – increased traffic since Victoria Bridge closed; speeding downhill between Melrose Avenue & McPherson Avenue and in front of Nutana Collegiate; bus route isn't needed here
- 12th Street – speeding; high traffic volumes
- Broadway Avenue – speeding; high traffic volumes

- Clarence Avenue – speeding (particularly near 11th Street); high traffic volumes; difficult to make left turns onto
- Dufferin Avenue – speeding
- Eastlake Avenue – speeding (especially between 8th Street & 10th Street)
- Idylwyld Drive / Lorne Avenue – speeding around corner making it dangerous for those living on end of 9th Street; right lane should end at 9th Street
- Main Street – speeding; shortcutting between Preston Avenue and Broadway Avenue; high traffic volumes due to condos
- Poplar Crescent – speeding (including transit); no need for bus route; back lane speeding
- Saskatchewan Crescent – pinch point under Sid Buckwold Bridge does nothing but speed up traffic toward this intersection; speeding between Broadway Avenue & University Drive; speeding between 8th Street & Idylwyld Crescent; no need for bus route
- Saskatchewan Crescent & Idylwyld Crescent – speeding around corners
- Temperance Street (near 14th Street & Lansdowne Avenue) – speeding from Clarence Avenue to Lansdowne Avenue
- University Drive – speeding; improve access off of 12th Street near Broadway Bridge
- Traffic noise (particularly at the "5 corners", 8th Street, and Saskatchewan Crescent)
- Back lanes – high traffic volumes (especially near Broadway Avenue); speeding (near Nutana Collegiate); shortcutting near 8th Street to access Idylwyld Drive; drivers not watching for pedestrians when exiting; traffic calming on main streets may push more traffic into back lanes

Proposed solutions identified by residents:

- Install yield signs (Dufferin Avenue)
- Install stop signs (Albert Avenue & 14th Street; Main Street; Saskatchewan Crescent)
- Install all-way stop signs (9th Street & Dufferin Avenue; 9th Street & McPherson Avenue; 10th Street & Dufferin Avenue; Eastlake Avenue & 10th Street; Eastlake Avenue & 11th Street; Eastlake Avenue & Main Street; Main Street between Clarence Avenue & Broadway Avenue; Poplar Crescent & 8th Street West; McPherson Avenue & Saskatchewan Crescent; Dufferin Avenue)
- Install roundabout (Eastlake Avenue & 9th Street; Eastlake Avenue & Main Street; Saskatchewan Crescent West & 8th Street West)
- Broadway Avenue – implement "complete street" design; should be reduced to one lane in both directions, one lane parking, one lane driving lane, left-turn bays at intersections, protected cycle track between parking lane and sidewalk; raised / textured crosswalks
- Broadway Avenue & 12th Street - install speed bumps from the top of the Broadway Bridge and through the school zone in front of Victoria School
- Dufferin Avenue - install grass medians
- 9th Street – restrict access to Idylwyld Drive / Lorne Avenue
- Saskatchewan Crescent – install "no trucks" sign; change to local traffic only; reduce speed limit
- Temperance Street (near 14th Street & Lansdowne Avenue) – install speed humps on Temperance Street before it curves and further down Lansdowne Avenue between 12th Street & 13th Street; close small street in front of cafe and change to park space
- Reduce speed limit to 40kph
- Install traffic calming at every intersection within neighbourhood
- Improve arterial roadways to avoid "ripple effect"
- Install diversions (i.e. diverters, closures) throughout neighbourhood
- Change narrow streets to one-way streets
- Transform streets into gardens and mini parks (University Drive, Saskatchewan Crescent, Broadway Avenue)
- Install speed humps
- Install advisory signage for new signage and traffic calming installations

CONCERN 2 - PEDESTRIAN SAFETY

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:

- 8th Street - need better pedestrian / cyclist crossing at Eastlake Avenue
- 9th Street & McPherson Avenue (existing temporary roundabout) – pedestrian safety concerns
- 10th Street - sidewalks closed on both sides at same time; poor sidewalk condition
- 11th Street between Broadway Avenue & Eastlake Avenue – dangerous for students to cross
- 12th Street - need safer cyclist / pedestrian crossings at Clarence Avenue, Lansdowne Avenue, Albert Avenue, & Dufferin Avenue
- Albert Avenue – lots of children in the area (near 14th Street)
- Broadway Avenue at 10th Street & 11th Street - more time needed to cross
- Broadway Avenue & 9th Street – pedestrian crossing improvements needed
- Broadway Avenue & 12th Street – dangerous to cross; drivers making right turn from 12th Street to Broadway Avenue don't watch for pedestrians; drivers have a lack of respect for pedestrians crossing and not slowing down in school zones; seniors in this area are also at risk as they cannot get across the street fast enough for the motorists
- Clarence Avenue - improve pedestrian crossings; pedestrians are obstructed from driver's view by trees
- Clarence Avenue & 14th Street – crossing is dangerous because drivers increase speed southbound due to hill
- Clarence Avenue & 11th Street - needs a pedestrian device because there are many children and seniors that cross (daycare, school, community centre)
- Dufferin Avenue & 11th Street – pedestrian safety concerns; many students crossing

- Eastlake Avenue & 10th Street – pedestrian safety concerns
- Eastlake Avenue & 12th Street – skateboarders coming down hill
- Saskatchewan Crescent & McPherson Avenue – high pedestrian traffic (runners, bikers, roller bladers & skate boarders) going straight through intersection feeling the street goes all the way to the park, not watching for traffic on Saskatchewan Crescent
- Saskatchewan Crescent West & 8th Street West – many pedestrians crossing to park
- Pedestrians not paying attention to traffic (i.e. earphones)

Proposed solutions identified by residents:

- Install yield signs, stop signs, or all-way stop (locations listed in "Speeding and Shortcutting" section)
- Install countdown timer (Broadway Avenue & 8th Street)
- 12th Street - install raised crosswalks or curb extensions
- Broadway Avenue – install raised or textured crosswalks; merge two school zones
- Dufferin Avenue & 11th Street – install 4-way stop instead of curb extension (existing temporary)
- School zones – more enforcement; implement 30kph speed limit during peak morning, noon, and evening times only to provide better traffic flow and install flashing lights to indicate these times; enforcement for jaywalking

CONCERN 3 - TRAFFIC CONTROL

Traffic control signs are used in order to assign the right-of-way and must meet guidelines in City of Saskatoon Council Policy C07-007 *Traffic Control – Use of Stop and Yield Signs*, January 26, 2009 which 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 control improvements were are at the following intersections:

- Broadway Avenue & 12th Street – left turn arrow needed
- Broadway Avenue - east/west traffic signal phases are too short
- Broadway Avenue & 11th Street - since traffic bridge has closed traffic has increased on 11th Street; traffic signals are very long to get onto Broadway Avenue
- Dufferin Avenue - yield signs are unsafe
- Eastlake Avenue at 10th Street and Main Street – U-turns
- Saskatchewan Crescent & McPherson Avenue – stop sign is placed too far back and difficult to see
- Saskatchewan Crescent West & 8th Street West – high traffic volumes (particularly trucks) turning left (southbound)
- Temperance Street (near 14th Street and Lansdowne Avenue) – no one yields
- Pedestrian timing at signal phasing results in long delay for drivers
- Uncontrolled intersections west of Idylwyld Drive need to be signed

Proposed solutions identified by residents:

- Install yield signs, stop signs, all-way stops (locations listed in “Speeding and Shortcutting” section)
- Broadway Avenue & 11th Street - shorter light phase
- Temperance Street & 14th Street - re-orient yield signs to give right-of-way to Temperance Street
- Enforcement for stop signs and red lights

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:

- On-street parking causes visibility issues / obstructs drivers view (11th Street, 12th Street, Dufferin Avenue near Amigo's)
- Broadway Ave on 10th Street (near Bulk Cheese Warehouse) - traffic gets backed up due to angle parking
- 9th Street & Main Street between Victoria Avenue & Melrose Avenue (near Las Palapas & Homestead Ice Cream Parlour) – high parking turnover
- 9th Street - parallel parking near Luxe; parking needed for church between Victoria Avenue & Eastlake Avenue (400 block)
- 10th Street & 11th Street - narrow streets caused by on-street parking between Clarence Avenue & Broadway Avenue
- Albert Avenue - more parking restrictions needed
- Temperance Street (near 14th Street and Lansdowne Avenue) - more parking restrictions needed; parking around north of porkchop at Temperance Street / Lansdowne Avenue is obstructing view
- Nutana Collegiate – activities at school deter parking; parking in "no parking" zone and idling during pick up times; parking too close to back lanes
- Driver's parking in Nutana and walking to work downtown

Proposed solutions identified by residents:

- 9th Street & Main Street between Victoria Avenue & Melrose Avenue (near Las Palapas & Homestead Ice Cream Parlour) - change to Residential Parking Permit (RPP) Zone; change RPP to less than 10 block face requirement
- 10th Street & 11th Street between Clarence Avenue & Broadway Avenue – implement one-way streets
- 11th Street near Broadway Avenue – install 'no parking' signs to improve sight obstructions
- Increased parking enforcement
- Broadway Avenue – make angle parking into "small car parking only"
- Broadway Avenue on 10th Street - remove angle parking up to alley or widen curbs
- Eastlake Avenue – install more angle parking
- Nutana Collegiate – designate parking lots for students on 10th Street and Eastlake Avenue
- Install 4-hour parking limit on residential streets to deter downtown users

CONCERN 5 - CYCLING

Cycling is a practical mode of transportation in Nutana, as the neighbourhood is in close proximity to the downtown, the University of Saskatchewan, and other nearby amenities.

Neighbourhood concerns regarding cycling were:

- Curb extensions are unsafe for cyclists
- Develop a neighbourhood plan that is considerate of cyclists (all ages)

Proposed solutions identified by residents:

- 12th Street - install bike lanes
- Broadway Avenue – install protected cycle track between parking lane and sidewalk; install bike corrals
- More enforcement needed for cyclists that don't follow rules
- Separate cycling facilities (especially on either end of bridges)

CONCERN 6 - MAINTENANCE

Residents were concerned about the condition of the streets in Nutana (i.e. snow clearing, potholes, tree trimming, and temporary traffic calming devices).

Neighbourhood concerns regarding maintenance were at the following locations:

- Eastlake Avenue (Saskatchewan Crescent to 12th Street) - trees covering "no parking" signs
- Back lanes – not enough gravel
- Traffic signs on telephone poles / power poles can go unnoticed; steel poles are better
- 8th Street – drivers heading westbound turning right northbound onto Clarence Avenue don't notice pedestrians with walk signal to go southbound across 8th St due to shrubs and signage
- Broadway Avenue - signs on median aren't visible; need to be lowered so they reflect in headlights; potholes
- 600 block of Eastlake Avenue near back lane – hedges obstructing sidewalk
- 12th Street near back lane south of University Drive – snow pile causes sight obstruction; paving needed
- Snow removal needed (especially on bridges, narrow streets, and bus routes)
- Mess left from contractors / infill projects; ruts and holes need to be filled
- Crosswalks are in poor condition; signage / paint aren't clear

CONCERN 7 – CLARENCE AVENUE & MAIN STREET REVIEW

The intersection of Clarence Avenue and Main Street was reviewed in 2013, including traffic and pedestrian volumes, collision data and analysis of operational and safety conditions.

Clarence Avenue is a major arterial roadway with a traffic volume of approximately 11,250 vehicles per day, and Main Street is a local street carrying up to 2,500 vehicles per day, substantially more than acceptable for a local street, which typically carries up to 1,000 vehicles per day. It was determined that approximately 50% of traffic on Main Street was not turning off of Main Street at Clarence Avenue, but were simply making a through movement. As a result, Main Street has been a large generator of traffic collisions at the intersection with Clarence Avenue (84 collisions reported in the past five years, 43% right angle collisions).

An effective and practical measure is to prohibit through and left turn movements on Main Street at Clarence Avenue. To force the movements, the centre median on Main Street would need to be modified to physically prevent cross traffic and left turn movements and to force right turns onto Clarence Avenue. It is anticipated that this measure would reduce traffic volume on Main Street by approximately 50% and would also reduce the number of collisions at this intersection by 46%.

The proposed measure was presented to residents during the initial public consultation and the feedback received was inclusive as many residents were not in favour of the discussed change.

Neighbourhood concerns regarding the proposed measure to prohibit through and left turn movements on Clarence Avenue & Main Street:

- Proposed measure will divert traffic onto 9th Street & 10th Street
- In favour of restrictions on Clarence Avenue - may decrease traffic flow on Main Street and slow traffic
- No issues at the intersection; leave as is
- Many condos on Main Street resulting in high traffic volumes

Proposed solutions identified by residents:

- Install full traffic signals

3. Assessment

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 data 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 judgement.

The following sections provide details on the data collected for traffic volumes (peak hours, daily, and weekly), travel speed, and pedestrian movements.

1. Traffic 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 85th percentile speed, which is the speed at which 85 percent of vehicles are travelling at or below. The speed limit in the Nutana area is 50kph, except for school zones where the speed limit is 30kph 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 (2014)

Street	Between	Class	Average Daily Traffic (vpd)	Speed (kph)
Back lane east of Eastlake Avenue	11th Street & 12th Street	lane	487	22
Back lane west of Broadway Avenue	10th Street & 11th Street		340	24
Back lane north of 8th Street	McPherson Avenue & Idylwyld Drive		<100	NA
8th Street West	Coy Avenue & Poplar Avenue	local	2,498	57
9th Street	Idylwyld Drive & McPherson Avenue		665	45
10th Street	Broadway Avenue & Eastlake Avenue		156	55
11th Street between Melrose Avenue & McPherson Avenue	Broadway Avenue & Eastlake Avenue		2,157	40
11th Street	Melrose Avenue & McPherson Avenue		475	35
Main Street	Clarence Avenue & Albert Avenue		2,502	43
Eastlake Avenue	8th Street & 9th Street		923	42
University Drive	14th Street & 15th Street		356	48
Poplar Crescent	8th Street & Cherry Street		786	41
Dufferin Avenue	11th Street & 12th Street		2,186	44 (school hours) & 45 (regular hours)
Eastlake Avenue	11th Street & 12th Street		1,590	33 (school hours) & 35 (regular hours)
Saskatchewan Crescent	8th Street & Idylwyld Drive	minor collector	1,604	55
Saskatchewan Crescent	McPherson Avenue & Sid Buckwold Bridge		605	44
Saskatchewan Crescent	Idylwyld Drive & McPherson Avenue		660	44
12th Street	Lansdowne Avenue & Albert Avenue	major collector	4,672	54
Broadway Avenue	10th Street & 11th Street	minor arterial	15,960	NA
Clarence Avenue	15th Street & Colony Street	major arterial	7,502	56
Clarence Avenue	10th Street & 11th Street		7,744	55

2. 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. 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 4-way stop and 25% for a 3-way stop.
2. No other all-way stop or traffic signals within 200m.

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

Table 3-3: All-Way Stop Assessments

Location	Peak Hour Count	ADT (vehicles per day)	# of Collisions within most recent 12 months	% of Traffic from minor street	Traffic Signals or all-way stop within 200m	All-Way Stop Warrant
Main Street & Eastlake Avenue	301	3,160	5	45	yes (165m from traffic signals on Broadway Avenue)	Continue assessment due to high collisions
Eastlake Avenue & 9th Street	159	1,700	0	36	no	Not Warranted
Eastlake Avenue & 10th Street	245	2,770	0	50	no	
Eastlake Avenue & 11th Street	316	3,780	2	45	yes (165m from traffic signals on Broadway Avenue)	
Dufferin Avenue & 9th Street	243	2,720	0	34	no	
Dufferin Avenue & 10th Street	329	3,370	1	49	yes (165m from traffic signals on Broadway Avenue)	
Dufferin Avenue & 11th Street	250	3,090	1	49	yes (165m from traffic signals on Broadway Avenue)	
McPherson Avenue & 9th Street	159	1,720	0	26	yes (100m from traffic signals on 8th Street)	
9th Street & Idylwyld Drive/Lorne Avenue	684	7,010	0	8	yes (100m from traffic signals on 8th Street)	
Albert Avenue & 14th Street	103	1,090	1	43	no	
Poplar Crescent & 8th Street West	230	2,860	0	13	yes (90m from traffic signals on Saskatchewan Crescent)	
Saskatchewan Crescent & McPherson Avenue	149	1,500	0	34	no	

As a result of the assessment there are no all-way stop controls recommended. Details of the all-way stop assessments are provided in **Appendix A**.

3. 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-9:00am, 11:30am-1:30pm, and 3:00pm-5:00pm.

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 During Peak Hours	Results
Broadway Avenue & 9th Street	289	Pedestrian Devices Warranted
Clarence Avenue & 11th Street	84	
Clarence Avenue & 14th Street	39	Pedestrian Devices Not Warranted
Eastlake Avenue & 8th Street	37	
Lansdowne Avenue & 12th Street	40	
Albert Avenue & 12th Street	27	
McPherson Avenue & 9th Street	12	
Saskatchewan Crescent & McPherson Avenue	163	

As a result of the assessment, no pedestrian devices are recommended. Details of the pedestrian device assessments are provided in **Appendix B**.

4. Plan Development

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
- Revise the draft plan based on feedback from the stakeholders
- Circulate the plan to the Civic Divisions for comment
- 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.

4.1 Presentation of Draft Plan

1. 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 regarding speeding and shortcutting are provided in **Table 4-1**.

Table 4-1: Recommended Speeding and Shortcutting Improvements

Location	Recommended Improvement[1]	Justification
12th Street & Lansdowne Avenue	Median island	Reduce speed at pedestrian crossing near bus stop
Saskatchewan Crescent W between Idylwyld Crescent & 8th Street	Curb extension	Reduce speed & enhance pedestrian safety near park
8th Street & Poplar Crescent	Median island & curb extension	Reduce speed at pedestrian crossing & along transit route
Dufferin Avenue & 11th Street	Permanent curb extension	Reduce speed at pedestrian crossing near school
Saskatchewan Crescent between Cherry Street & 8th Street	Temporary speed display board during summer	Reduce speed in high pedestrian area

[1] For details on these devices refer to the *City of Saskatoon Traffic Calming Guidelines and Tools*

2. Pedestrian Safety

Nutana residents identified pedestrian safety near Nutana School and Ashworth Holmes Park as a concern. The safety of the pedestrian environment near schools is important to encourage people to walk to school, as opposed to being dropped off. Accordingly, the recommended improvements to increase pedestrian safety are detailed in **Table 4-2**.

Table 4-2: Recommended Pedestrian Safety Improvements

Location	Recommended Improvement	Justification
Broadway Avenue	Extend School Zone	Reduce speed in high pedestrian area
Clarence Avenue & 14th Street	Zebra crosswalk & enhance pedestrian signs	Enhance pedestrian safety along transit route, hill, & cycling route
Saskatchewan Crescent East & McPherson Avenue	Enhance pedestrian signs	Enhance pedestrian safety near park
Saskatchewan Crescent West & 8th Street West	Zebra crosswalks	Enhance pedestrian safety near park
Eastlake Avenue & 11th Street	Zebra crosswalks	Enhance pedestrian safety near school
Saskatchewan Crescent West between Idylwyld Crescent & 8th Street West	Midblock crossing	Enhance pedestrian safety near park
8th Street West & Poplar Crescent	Zebra crosswalk	Enhance pedestrian crossing along transit route
Clarence Avenue & 11th Street	Active pedestrian corridor	Enhance pedestrian safety near daycare, playground, community centre
Broadway Avenue & 9th Street	Pedestrian-activated signal	Enhance pedestrian safety in high pedestrian traffic area
Broadway Avenue	Chirping' sound to indicate crossings at intersections where traffic signals are present	Enhance pedestrian safety for visually impaired

3. 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
Dufferin Avenue & 9th Street	Stop signs	Enhance compliance
Dufferin Avenue & 10th Street	Stop signs	Enhance compliance
Dufferin Avenue & 11th Street	Stop signs	Enhance compliance
Eastlake Avenue & 10th Street	Stop signs	Enhance compliance
Eastlake Avenue & Main Street	4-way stop	Warranted based on high collisions

The collision history at the intersection of Eastlake Avenue and Main Street warranted an all-way stop. However the warrant criteria states there should be no traffic signals within 200m of the intersection; there are currently traffic signals 165m east of the intersection at Broadway Avenue. Since traffic volumes are low at the intersection (approximately 3,160 vehicles per day) queue spillback into nearby intersections is not expected to occur and based on the collision history, a 4-way stop is recommended.

4. Parking Improvements

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

Table 4-4: Recommended Parking Improvements

Location	Recommended Improvement	Justification
12th Street & Lansdowne Avenue	Parking restrictions	Improve visibility to enhance pedestrian safety along transit route
Saskatchewan Crescent East & McPherson Avenue	Parking restrictions	Improve visibility to enhance pedestrian safety near park
Various locations	Parking enforcement	Prevent parking too close to intersections, alleys, & driveways obstructing drivers view; parking in restricted zones (particularly near schools and during events); improve safety

4.2 Revision of Draft Plan

The draft plan presented at the follow-up public meeting in September 2014 included recommended improvements that were not supported by the residents and were either eliminated or altered accordingly. Three issues required an additional follow-up meeting that was held in January 2015:

1. 9th Street – shortcutting to access Idylwyld Drive
2. Lansdowne Avenue / Temperance Street / 14th Street – speeding, shortcutting, and pedestrian safety
3. The neighbourhood core area bound by 8th Street, Clarence Avenue, Victoria Avenue, and 12th Street - shortcutting

1. 9th Street Shortcutting:

Prior to 2011, residents proposed a full closure at 9th Street at Idylwyld Drive to address shortcutting concerns, but City Council did not adopt this proposal. Instead, a temporary roundabout was installed at the intersection of 9th Street and McPherson Avenue in 2011 to address shortcutting. Recent studies indicated traffic volumes were within the acceptable range on 9th Street between McPherson Avenue and Idylwyld Drive, and accordingly permanent installation of the roundabout was proposed during the public consultation in September 2014. However, residents did not support this initial recommendation. As a result, the following recommendation was presented at the January 2015 follow-up meeting:

- 9th Street & McPherson Avenue – remove temporary roundabout
- 9th Street & Idylwyld Drive / Lorne Avenue – install directional closure (cul-de-sac)

At the January 2015 follow-up meeting residents were in support of the recommendations and requested that the design of the cul-de-sac consider existing trees and houses.

The resulting recommended 9th Street and Idylwyld Drive intersection improvement is illustrated in **Exhibit 4-1**.

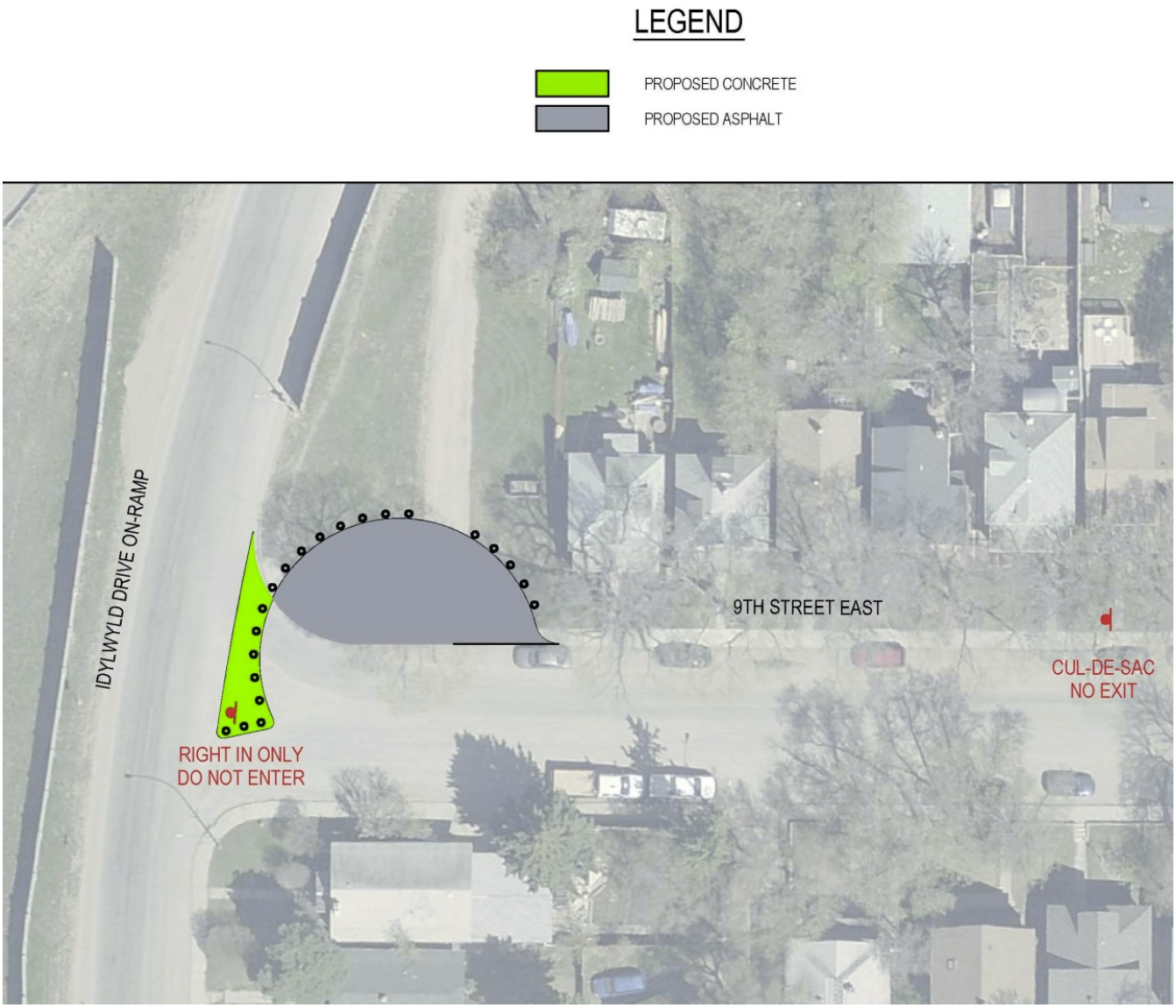


Exhibit 4-1: 9th Street & Idylwyld Drive Intersection Improvement

2. Lansdowne Avenue / Temperance Street / 14th Street:

During the September 2014 follow-up meeting residents expressed their concerns for pedestrian safety, speeding, and traffic controls in the area surrounding the café on Temperance Street, 14th Street, and Lansdowne Avenue; therefore the following recommendations were presented at the January 2015 follow-up meeting:

- Lansdowne Avenue between 14th Street & Temperance Street – narrow median to reduce speed
- Lansdowne Avenue & Temperance Street – curb extensions that decrease room for turning movements and resulting in a speed reduction, and install stop sign
- 14th Street between Lansdowne Avenue & Temperance Street – full closure with opening for cyclists and pedestrians, resulting in a reduced number of turning movements in area to reduce number of conflict points
- Install pedestrian crosswalks on 14th Street across Temperance Street and Lansdowne Avenue

At the January 2015 follow-up meeting residents were generally in support of the recommendations, and provided the following comments:

- Proposed changes may increase traffic noise at corner due to decelerating / accelerating; perhaps a yield sign on Lansdowne Avenue (northbound) and Temperance Street instead of a stop sign would help to address some concerns over added noise from the buses having to navigate the more pronounced corner
- Ensure there's adequate space for turning movements (including buses since there is a bus route here)
- Proposed changes may increase traffic on Lansdowne Avenue
- Proposed changes may create speeding on Temperance Street between Lansdowne Avenue and 13th Street
- Collisions are low and don't support design
- Headlights will shine into houses on the west side of Temperance Street
- Temperance Street is a thoroughfare all the way from Clarence Avenue to 12th Street because there are no stops; install stop signs on Temperance Street
- Consider impacts of parking if changes are made
- Discuss changes with café owners
- Consider costs of changes

Based on the feedback received at the January 2015 follow-up meeting, the Administration revised the plan as follows:

- Remove additional median on Lansdowne Avenue between 14th Street and Temperance Street
- Alter curb extension and change yield sign to stop sign at Lansdowne Avenue & Temperance Street
- Add yield sign at 14th Street & Temperance Street
- Add parking restrictions to improve visibility of pedestrians (number of parking throughout area will be minimally effected)
- Speed study on Temperance Street near 14th Street to determine if speeding is created

The resulting recommended Lansdowne Avenue / Temperance Street / 14th Street intersection improvement is illustrated in **Exhibit 4-2**.

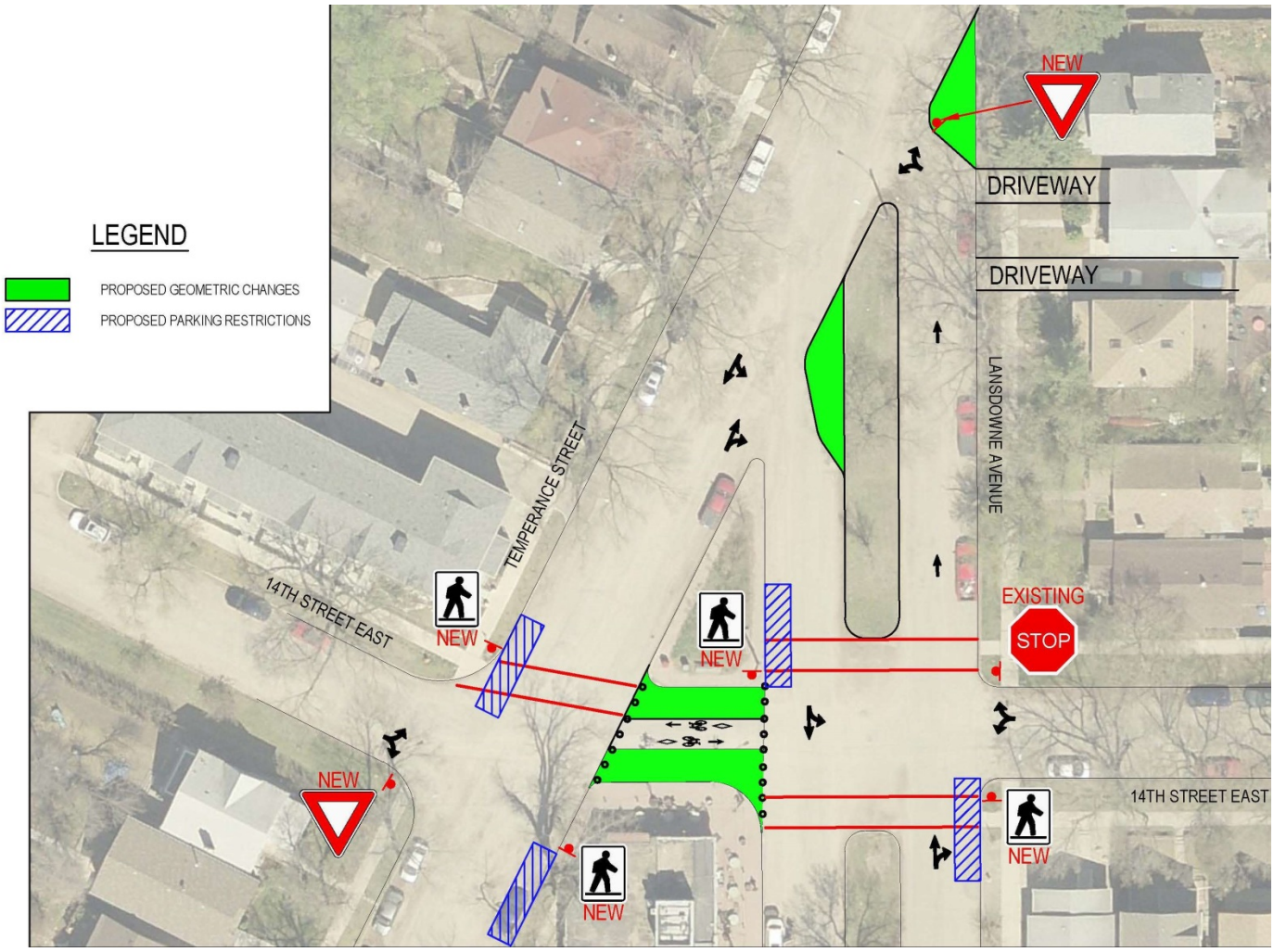


Exhibit 4-2: Lansdowne Avenue / Temperance Street / 14th Street Intersection Improvement

3. Neighbourhood Core Area:

During the September 2014 follow-up meeting, residents were concerned the draft plan did not address shortcutting and speeding throughout the area bound by 8th Street, 12th Street, Victoria Avenue, and Clarence Avenue; therefore the following recommendations were added:

- Victoria Avenue – install left turn restrictions southbound between 8th Street and the Victoria Bridge (9th Street, Main Street, 10th Street, and 11th Street)
- Clarence Avenue - install left turn restrictions northbound between 8th Street and 12th Street (9th Street, Main Street, 10th Street, and 11th Street)
- Roundabouts on Eastlake Avenue at Main Street & 10th Street; and on Dufferin Avenue at 9th Street, Main Street, 10th Street, & 11th Street.

Residents, in general, did not support the left turn restrictions on Victoria Avenue and Clarence Avenue. Mixed support was received for the roundabouts, including the following comments provided by residents:

- Roundabouts are confusing;
- Pedestrian safety is a concern, especially at 11th Street near the school where many children cross;
- Trucks need to make deliveries to businesses; and
- Loss of parking will negatively impact businesses.

Based on the feedback received, left turn restrictions and roundabouts were not included in the draft plan.

A summary of the recommendations resulting from the review of the outstanding items and the January 2015 follow-up meeting are outlined in **Table 4-5**.

Table 4-5: Recommended Improvements Resulting from Additional Review

Location	Recommended Improvement	Justification
9th Street & Idylwyld Drive / Lorne Avenue	Directional closure	Reduce traffic volumes on 9th Street (shortcutting to Idylwyld Drive access)
9th Street & McPherson Avenue	Remove temporary roundabout	Directional closure at Idylwyld Drive will address shortcutting issues
Temperance Street / Lansdowne Avenue / 14th Street	Roadway realignment; 14th Street closure; yield sign; stop sign; parking restrictions; pedestrian crossings	Reduce speed, enhance pedestrian crossings, reduce confusion, reduce points of conflict to improve overall safety near café and along cycling route

A decision matrix addressing the list of recommended improvements presented at the follow-up meetings are included in **Appendix C**. A decision matrix for additional comments received is also included in **Appendix C**.

4.3 Main Street – Shortcutting

Main Street shortcutting between Cumberland Avenue and Broadway Avenue was identified as a concern during the public consultation for both the Nutana and Varsity View neighbourhoods. A proposed recommendation at the January 2015 follow-up meeting to prohibit left and through movements at Clarence Avenue and Main Street was, in general, not supported by residents.

The Administration proposed another recommendation to mitigate the short-cutting along Main Street in March and April of 2015. The proposal included installing a raised curb to restrict east-west vehicular movement through the intersection of Main Street and Lansdowne Avenue. Curb cuts would be installed to permit the movement of bicycles and pedestrians through the intersection. Vehicles would be permitted to turn right only arriving at the intersection from the east or west. Vehicles arriving at the intersection from the north or south would not be permitted to turn left. The proposal outlined that this restriction would be installed in a temporary fashion, and evaluated after one year. A similar recommendation for the intersection of Main Street and

Wiggins Avenue is provided in the Varsity View Neighbourhood Traffic Review report. A sketch of the proposed restriction is illustrated in **Exhibit 4-3**.

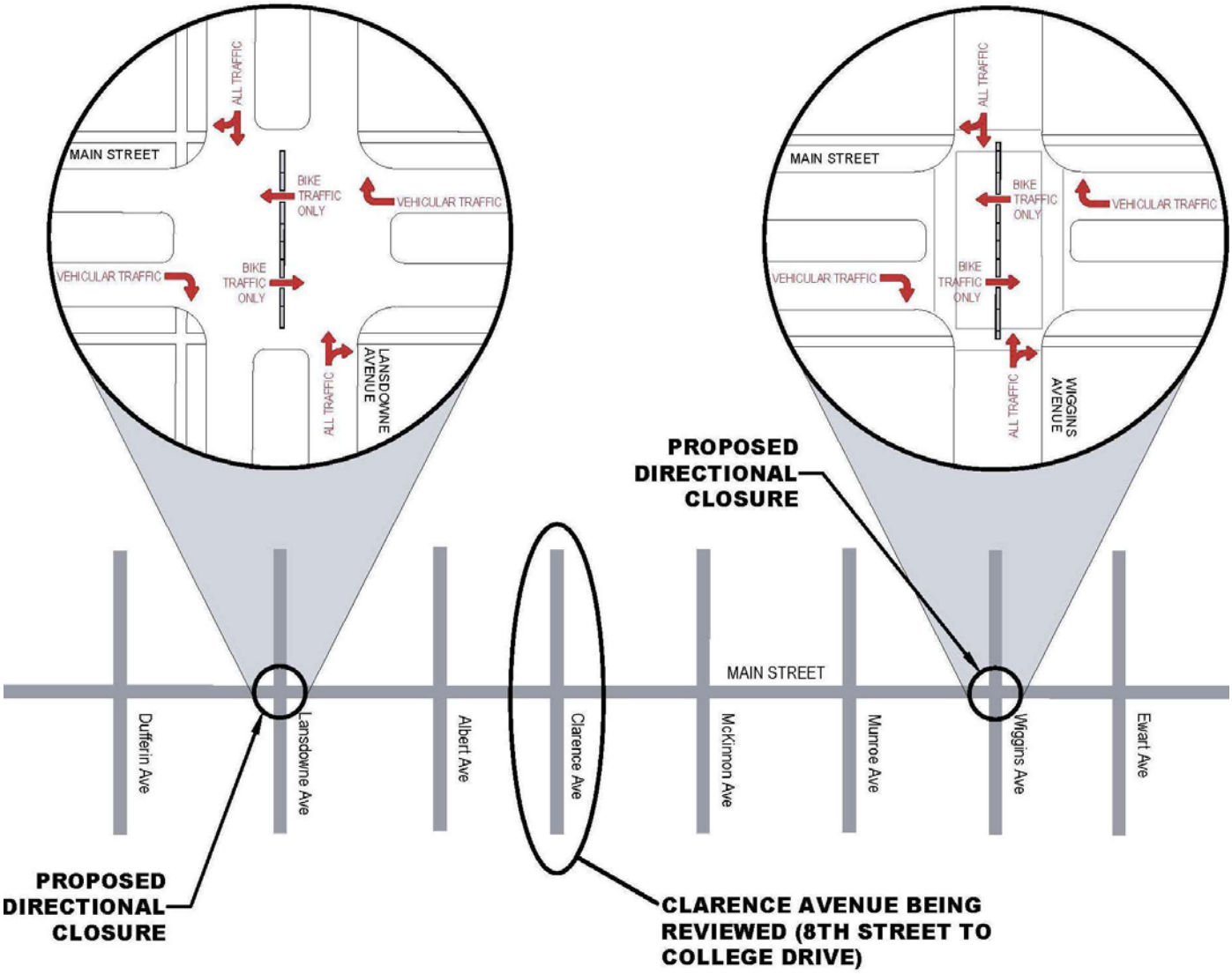


Exhibit 4-3: Main Street Short-Cutting Mitigation

Letters were sent to the residents of dwellings that front Main Street in Nutana between Clarence Avenue and Broadway Avenue for their feedback. In Nutana 104 letters were mailed out, and 39 responses were returned with 19 indicating support, and 20 indicated opposition. As a result the proposed recommendation is not carried forward.

The Varsity View residents along Main Street indicated support, and accordingly the short-cutting mitigation will be installed at the intersection of Main Street and Wiggins Avenue in a temporary fashion for one year. The effect of the change will be evaluated after one year and a recommendation to either install permanent curbing or remove the temporary curbing will be provided.

4.4 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 Clarence Avenue or 8th 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.

A number of concerns were raised for Clarence Avenue, particularly the intersection at 8th Street. As such, a corridor study is recommended for Clarence Avenue between 8th Street and College Drive, and will be added to the list of Corridor Studies.

A number of concerns were also raised for the Victoria Avenue corridor (between 8th Street and the future Victoria Bridge). Traffic conditions along this corridor are expected to change after the opening of the new Victoria Bridge; therefore a review will be conducted at that time.

4.5 Circulation of Plan to Civic Departments

Once the traffic plan was finalized, 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 along with the following comments from Transit, “ensure turning movements at Temperance Street & Lansdowne Avenue are not affected; ensure turning movements at 12th Street and Lansdowne Avenue are not affected.”

5. Recommended Plan and Cost Estimates

Stage 4, the last stage of the process, is to install the recommended improvements for the Nutana 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 pedestrian and traffic control signage will be completed short-term (1 to 2 years).

All traffic calming measures will be installed temporarily using rubber curbing until proven effective, and will be implemented short-term (1 to 2 years).

Permanent traffic calming often includes removing the temporary barriers and reconstructing with concrete. The timeline for permanent traffic calming may depend on the complexity of the device and the availability of funding; therefore the timeline is medium-term (3 to 5 years).

Major intersection and corridor reviews are based on the number of other locations to be reviewed city-wide and the availability of funding. The timeline for each review will vary significantly (1 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 Cost Estimate
- **Table 5-2**: Marked Pedestrian Crosswalks Cost Estimate
- **Table 5-3**: Traffic Control Signage Cost Estimate
- **Table 5-4**: Parking Improvements Cost Estimate
- **Table 5-5**: Total Cost Estimate

Table 5-1: Traffic Calming Cost Estimate

Location	Device (s)	Cost Estimate		Time Frame
		Temporary	Permanent	
Saskatchewan Crescent West between Idylwyld Crescent & 8th Street West	Curb extension	$500	$30,000	1 to 2 years for temporary devices and 3 to 5 years for permanent installation (traffic calming devices will be installed temporarily until proven effective)
12th Street & Lansdowne Avenue	Median island	$500	$6,000	
8th Street West & Poplar Crescent	Median island & curb extension	$1000	$36,000	
Temperance Street / Lansdowne Avenue / 14th Street	Roadway realignment & 14th Street closure	$3,000	$20,000	
9th Street & Idylwyld Drive / Lorne Avenue	Directional closure	$0	$30,000	
9th Street & McPherson Avenue	Remove temporary roundabout	$0	$0	
Dufferin Avenue & 11th Street	Permanent curb extension (northwest corner)	$0	$30,000	
	Totals	$5,000	$152,000	

Temporary traffic calming will be installed in 2015 and will be monitored to determine its effectiveness. If proven effective, the devices will be made permanent. Until they are made permanent, the devices will remain temporary and maintained on a yearly basis. An estimated cost for maintenance is about $5,000 per year. The maintenance typically involves the replacement of damage curbs as result of snow removal, damage from vehicle impact, etc.

Table 5-2: Marked Pedestrian Crosswalks Cost Estimate

Location	Device (s)	Cost Estimate	Time Frame
Clarence Avenue & 14th Street	Zebra crosswalk & enhance pedestrian signs	$1,700	1 to 2 years
Saskatchewan Crescent East & McPherson Avenue	Enhance pedestrian signs	$500	
Saskatchewan Crescent East & McPherson Avenue	Enhance pedestrian signs	$500	
Saskatchewan Crescent West & 8th Street West	Zebra crosswalks	$1,800	
Eastlake Avenue & 11th Street	Zebra crosswalks	$1,800	
Saskatchewan Crescent West between Idylwyld Crescent & 8th Street West	Standard crosswalk	$1,200	
8th Street West & Poplar Crescent	Zebra crosswalk	$1,400	
Temperance Street / Lansdowne Avenue / 14th Street	Standard crosswalks	$1,400	
Broadway Avenue	Extend School Zone	$500	
Clarence Avenue & 11th Street	Active pedestrian corridor	$20,000	3 to 5 years
Broadway Avenue & 9th Street	Pedestrian-activated signal	$30,000	
Broadway Avenue	Chirping' sound to indicate crossings at intersections where traffic signals are present	$0 (Funded through Traffic Operations projects)	
	Total	$60,800	

The operating cost on an annual basis to maintain a crosswalk is approximately $60 each.

Table 5-3: Traffic Control Signage Cost Estimate

Location	Device (s)	Number of Signs	Cost Estimate	Time Frame
Dufferin Avenue & 9th Street	Stop sign	2	$500	1 to 2 years
Dufferin Avenue & 10th Street	Stop sign	2	$500	
Eastlake Avenue & 10th Street	Stop sign	2	$500	
Eastlake Avenue & Main Street	4-way stop	4	$1,000	
Temperance Street / Lansdowne Avenue / 14th Street	Yield sign & stop sign	2	$500	
Dufferin Avenue & 11th Street	Stop sign	2	$500	
Saskatchewan Crescent between Cherry Street & 8th Street	Temporary speed display board during summer	1	(Funded through Speed Management Program)	
Total			$3,500	

Table 5-4: Parking Improvements Cost Estimate

Location	Device (s)	Number of Signs	Cost Estimate	Time Frame
Saskatchewan Crescent East & McPherson Avenue	No parking sign	4	$1,000	1 to 2 years
12th Street & Lansdowne Avenue	No parking sign	1	$250	
14th Street at Temperance Street & Lansdowne Avenue	No parking sign	4	$1,000	
Total			$2,250	

Table 5-5: Total Cost Estimate

Category	Signage & Temporary Traffic Calming	Permanent
Traffic Calming	$5,000	$152,000
Pedestrian Crosswalk Signage & Pavement Markings	$10,800	N/A
Pedestrian Devices	N/A	$50,000
Traffic Control Signage	$3,500	N/A
Parking Signage	$2,250	N/A
Total	$21,550	$202,000

The total cost estimate for the signage and temporary traffic calming devices to be installed in 2015 is **$21,550**. The total cost estimate for the installation of future permanent devices, including the active pedestrian corridor, pedestrian-activated signal, and permanent traffic calming is **$202,000**.

Resulting from the plan development process, the recommended improvements, including the location, type of improvement, and schedule for implementation are summarized in **Table 5-6.** The resulting recommended Nutana neighbourhood Traffic Management Plan is and displayed in **Exhibit 5-1.**

Table 5-6: Nutana Neighbourhood Recommended Improvements

Location	Recommended Improvement	Time Frame
Dufferin Avenue & 9th Street	Stop signs	1 to 2 years
Dufferin Avenue & 10th Street	Stop signs	
Eastlake Avenue & 10th Street	Stop signs	
Eastlake Avenue & Main Street	4-way stop	
Broadway Avenue	Extend School Zone	
Clarence Avenue & 14th Street	Zebra crosswalk & enhance pedestrian signs	
Saskatchewan Crescent East & McPherson Avenue	Enhance pedestrian signs & parking restrictions	
Saskatchewan Crescent West & 8th Street West	Zebra crosswalks	
Eastlake Avenue & 11th Street	Zebra crosswalks	
Saskatchewan Crescent West between Idylwyld Crescent & 8th Street West	Curb extension & midblock crossing	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
12th Street & Lansdowne Avenue	Median island & parking restrictions	
8th Street West & Poplar Crescent	Median island, curb extension & zebra crosswalk	
Temperance Street / Lansdowne Avenue / 14th Street	Roadway realignment; 14th Street closure; standard pedestrian crosswalks; yield sign; stop sign; parking restrictions	
9th Street & Idylwyld Drive / Lorne Avenue	Directional closure	
9th Street & McPherson Avenue	Remove temporary roundabout	
Dufferin Avenue & 11th Street	Stop signs; permanent curb extension (northwest corner)	1 to 5 years
Clarence Avenue & 11th Street	Active pedestrian corridor	
Broadway Avenue & 9th Street	Pedestrian-activated signal	
Broadway Avenue	Chirping' sound to indicate crossings at intersections where traffic signals are present	1 to 5 years (will be included as part of Traffic Operations budget)
Various locations	Parking enforcement	ongoing
Saskatchewan Crescent between Cherry Street and 8th Street	Install speed display board in summer	1 to 2 years

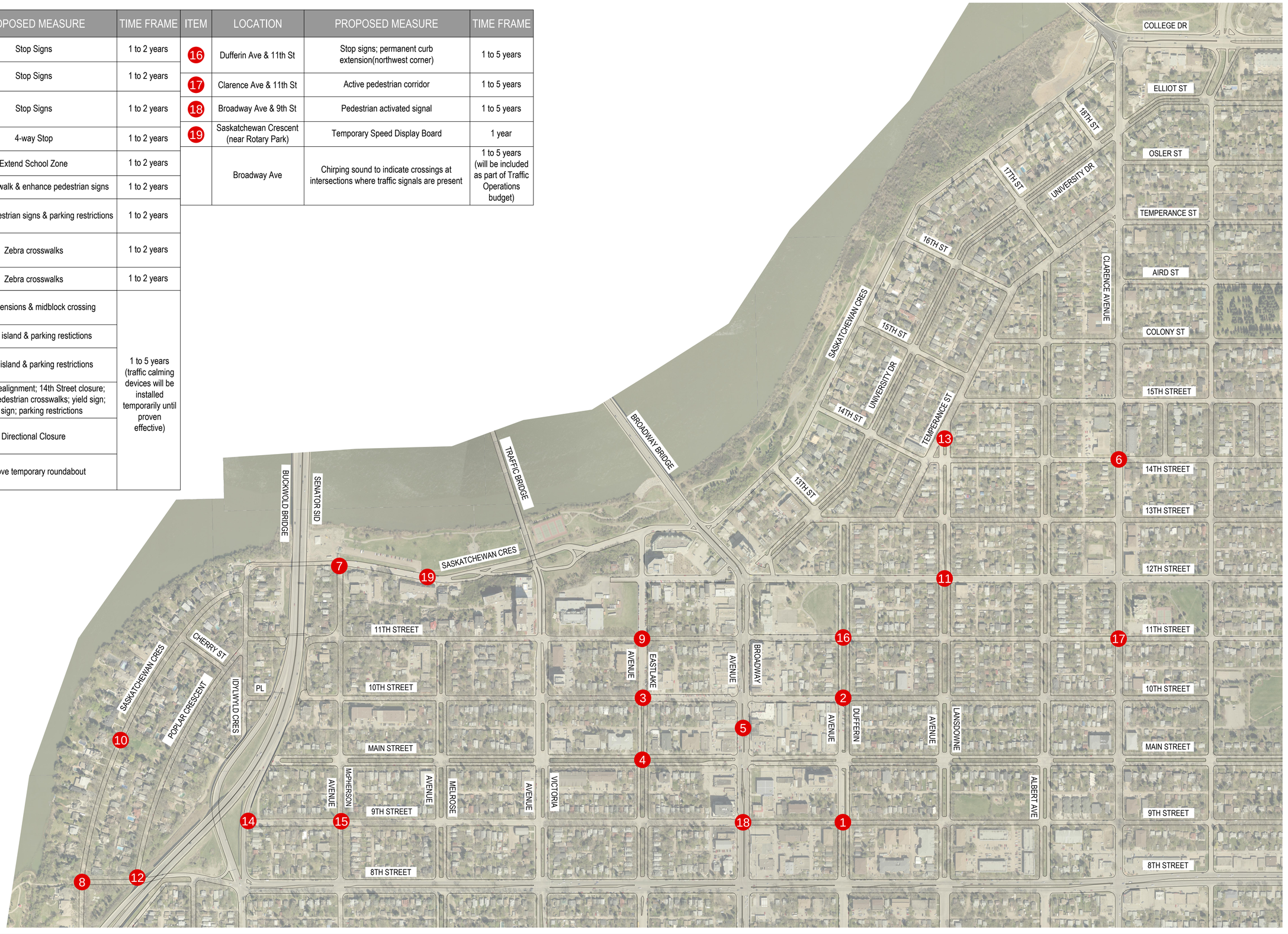
City of Saskatoon

NUTANA TRAFFIC PLAN

Exhibit 5-1

ITEM	LOCATION	PROPOSED MEASURE	TIME FRAME
1	Dufferin Ave & 9th St	Stop Signs	1 to 2 years
2	Dufferin Ave & 10th St	Stop Signs	1 to 2 years
3	Eastlake Ave & 10th St	Stop Signs	1 to 2 years
4	Eastlake Ave & Main St	4-way Stop	1 to 2 years
5	Broadway Ave	Extend School Zone	1 to 2 years
6	Clarence Ave & 14th St	Zebra crosswalk & enhance pedestrian signs	1 to 2 years
7	Saskatchewan Cres East & McPherson Ave	Enhance pedestrian signs & parking restrictions	1 to 2 years
8	Saskatchewan Cres West & 8th Street West	Zebra crosswalks	1 to 2 years
9	Eastlake Ave & 11th St	Zebra crosswalks	1 to 2 years
10	Saskatchewan Cres West between Idylwyld Cres & 8th St West	Curb extensions & midblock crossing	1 to 5 years (traffic calming devices will be installed temporarily until proven effective)
11	12th St & Lansdowne Ave	Median island & parking restictions	
12	8th St West & Poplar Cres	Median island & parking restrictions	
13	Temperance St Lansdowne Ave 14th St	Roadway realignment; 14th Street closure; standard pedestrian crosswalks; yield sign; stop sign; parking restrictions	
14	9th Street & Idylwyld Dr/Lorne Ave	Directional Closure	
15	9th Street McPherson Ave	Remove temporary roundabout	

ITEM	LOCATION	PROPOSED MEASURE	TIME FRAME
16	Dufferin Ave & 11th St	Stop signs; permanent curb extension(northwest corner)	1 to 5 years
17	Clarence Ave & 11th St	Active pedestrian corridor	1 to 5 years
18	Broadway Ave & 9th St	Pedestrian activated signal	1 to 5 years
19	Saskatchewan Crescent (near Rotary Park)	Temporary Speed Display Board	1 year
	Broadway Ave	Chirping sound to indicate crossings at intersections where traffic signals are present	1 to 5 years (will be included as part of Traffic Operations budget)



Appendix A

All Way Stop Assessments

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

Step 1:
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	Warrant Condition 1: Peak Hour Count is 600 or greater	Warrant Condition 2: Average Daily Traffic Exceeds 6,000 vehicles per day	Warrant Condition 3: Five or more collisions occurred within most recent 12 months	Results
Main Street & Eastlake Avenue	301	3,160	5	All-way stop warranted based on high collisions; proceed to Step 2
Eastlake Avenue & 9th Street	159	1,700	0	All-way stop NOT warranted
Eastlake Avenue & 10th Street	245	2,770	0	
Eastlake Avenue & 11th Street	316	3,780	2	
Dufferin Avenue & 9th Street	243	2,720	0	
Dufferin Avenue & 10th Street	329	3,370	1	
Dufferin Avenue & 11th Street	250	3,090	1	
McPherson Avenue & 9th Street	159	1,720	0	
9th Street & Idylwyld Drive / Lorne Avenue	684	7,010	0	All-way stop warranted based on high traffic volumes; proceed to Step 2
Albert Avenue & 14th Street	103	1,090	1	All-way stop NOT warranted
Poplar Crescent & 8th Street West	230	2,860	0	
Saskatchewan Crescent & McPherson Avenue	149	1,500	0	

Step 2:
Provided one of the above conditions is met, 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: Combined volume of traffic entering intersection from minor street is at least 25% for 3-way stop or 35% for 4-way stop**	**Condition 2: There can be no all-way stop or traffic signal within 200m**	**Results**
Main Street & Eastlake Avenue	45% - Condition met	165m from traffic signals on Broadway Avenue - Condition NOT met	All-way stop NOT warranted
9th Street & Idylwyld Drive/Lorne Avenue	8% - Condition NOT met	100m from traffic signals on 8th Street - Condition NOT met	

Appendix B

Pedestrian Device Assessments

Pedestrian device assessment (Traffic Controls at Pedestrian Crossing, 2004)

Albert Avenue & 12th Street:

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	=	135	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		= (hours) duration of counting period.
Ps	=	38.0		= total number of children, teenagers, seniors and/or impaired counted.
Pa	=	0.0		= total number of adults counted.
Pw	=	57.0		= weighted average of pedestrians crossing the main street.
Pcm	=	11.4		= weighted average hourly pedestrian volume crossing the main street.
V	=	3142.0		= volume of traffic passing through the crossing(s).
Vam	=	628.4		= average hourly volume of traffic passing through the crossing(s).
VOLF	=	14.3	points	= Vam x Pcm / 500

6. Satisfaction of Installation Criteria:

SUMF = (LANF + MEDF + SPDF + LOCF + VOLF)

SUMF	=	**27**	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.

Broadway Avenue & 9th Street:

1. Lanes Priority Points:

L =	4	lanes	= number of lanes.
LANF =	7.2	points	= (L-2) x 3.6 to a max of 15 points, urban x-section only.

2. Median Priority Points:

MEDF =	3.0	points	= indicating there is a 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 =	125	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	= (hours) duration of counting period.
Ps =	0.0	= total number of children, teenagers, seniors and/or impaired counted.
Pa =	289.0	= total number of adults counted.
Pw =	289.0	= weighted average of pedestrians crossing the main street.
Pcm =	57.8	= weighted average hourly pedestrian volume crossing the main street.
V =	6406.0	= volume of traffic passing through the crossing(s).
Vam =	1281.2	= average hourly volume of traffic passing through the crossing(s).
VOLF =	148.1 points	= Vam x Pcm / 500

6. Satisfaction of Installation Criteria:

SUMF = (LANF + MEDF + SPDF + LOCF + VOLF)

SUMF =	**165**	points

(P.A. Signal Warrant Points)

The total of the warrent points is at least 100 indicating that a pedestrian actuated signal IS warranted.

Clarence Avenue & 11th Street (Pedestrian-Activated Signal):

1. **Lanes Priority Points:**

L	=	4	lanes	= number of lanes.
LANF	=	7.2	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	=	100	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	= (hours) duration of counting period.
Ps	=	54.0	= total number of children, teenagers, seniors and/or impaired counted.
Pa	=	30.0	= total number of adults counted.
Pw	=	111.0	= weighted average of pedestrians crossing the main street.
Pcm	=	22.2	= weighted average hourly pedestrian volume crossing the main street.
V	=	4866.0	= volume of traffic passing through the crossing(s).
Vam	=	973.2	= average hourly volume of traffic passing through the crossing(s).

VOLF	=	43.2	points	= Vam x Pcm / 500

6. **Satisfaction of Installation Criteria:**

SUMF	=	(LANF + MEDF + SPDF + LOCF + VOLF)

SUMF	= **63**	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.

Clarence Avenue & 11th Street (Active Pedestrian Corridor):

Time (15 min int.)	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	Sr.'s	Total	15 min	30 min	Points	(1=Yes)	Periods
7:00												
7:15												
7:30												
7:45												
8:00	275	275			1		1	0.5	0.5	138		
8:15	279	554			1		1	0.5	1	554		
8:30	272	551	6		3		9	7.5	8	4,408		
8:45	243	515			3		3	1.5	9	4,635		
9:00		243							1.5	365		
9:15												
9:30												
9:45												
AM Totals	1,069		6		8		14					
11:30	231				2		2	1				
11:45	180	411	5		1		6	5.5	6.5	2,672		
12:00	220	400	8		2		10	9	14.5	5,800	1	5,800
12:15	194	414	16		2		18	17	26	10,764	1	10,764
12:30	208	402			2		2	1	18	7,236	1	7,236
12:45	221	429			1		1	0.5	1.5	644		
13:00	211	432							0.5	216		
13:15	210	421			1		1	0.5	0.5	211		
Noon Totals	1,675		29		11		40					23,800
14:00												
14:15												
14:30												
14:45												
15:00	235	235	18		4		22	20	20	4,700		
15:15	224	459							20	9,180	1	9,180
15:30	237	461			1		1	0.5	0.5	231		
15:45	261	498							0.5	249		
16:00	275	536	1		3		4	2.5	2.5	1,340		
16:15	296	571			2		2	1	3.5	1,999		
16:30	281	577			1		1	0.5	1.5	866		
16:45	313	594							0.5	297		
17:00		313										

17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45												
20:00												
20:15												
20:30												
20:45												
PM Totals	2,122		19		11		30					9,180
Totals	**4,866**		**54**		**30**		**84**					
			64%		36%		100 %					

North Crosswalk =	**74**
South Crosswalk =	**10**

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

SUMMARY

Total Warranted PC Points:	**32,980**	**or**	**8,245**	**/ period**
Highest PC point value:	**10,764**	**at**		
Average PC point value:	**3,767**			
No. of periods warranted:	**4**			

Clarence Avenue & 14th Street:

1. **Lanes Priority Points:**

L	=	4	lanes	= number of lanes.
LANF	=	7.2	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	=	210	m	= distance from study location to nearest protected crosswalk.
LOCF	=	0.8	points	= (D-200) / 13.3 to a maximum of 15 points.

5. **Pedestrian/Vehicle Volume Priority Points:**

H	=	5.0	= (hours) duration of counting period.
Ps	=	7.0	= total number of children, teenagers, seniors and/or impaired counted.
Pa	=	32.0	= total number of adults counted.
Pw	=	42.5	= weighted average of pedestrians crossing the main street.
Pcm	=	8.5	= weighted average hourly pedestrian volume crossing the main street.
V	=	5198.0	= volume of traffic passing through the crossing(s).
Vam	=	1039.6	= average hourly volume of traffic passing through the crossing(s).
VOLF	=	17.7 points	= Vam x 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.

Eastlake Avenue & 8th Street:

1. **Lanes Priority Points:**

L	=	4	lanes	= number of lanes.
LANF	=	7.2	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	=	175	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	= (hours) duration of counting period.
Ps	=	37.0	= total number of children, teenagers, seniors and/or impaired counted.
Pa	=	0.0	= total number of adults counted.
Pw	=	55.5	= weighted average of pedestrians crossing the main street.
Pcm	=	11.1	= weighted average hourly pedestrian volume crossing the main street.
V	=	7004.0	= volume of traffic passing through the crossing(s).
Vam	=	1400.8	= average hourly volume of traffic passing through the crossing(s).
VOLF	=	31.1 points	= Vam x Pcm / 500

6. **Satisfaction of Installation Criteria:**

SUMF = (LANF + MEDF + SPDF + LOCF + VOLF)

SUMF	=	**51** 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.

Lansdowne Avenue & 12th Street:

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	=	175	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	= (hours) duration of counting period.
Ps	=	40.0	= total number of children, teenagers, seniors and/or impaired counted.
Pa	=	0.0	= total number of adults counted.
Pw	=	60.0	= weighted average of pedestrians crossing the main street.
Pcm	=	12.0	= weighted average hourly pedestrian volume crossing the main street.
V	=	3245.0	= volume of traffic passing through the crossing(s).
Vam	=	649.0	= average hourly volume of traffic passing through the crossing(s).

VOLF	=	15.6	points	= Vam x Pcm / 500

6. **Satisfaction of Installation Criteria:**

SUMF	=	(LANF + MEDF + SPDF + LOCF + VOLF)

SUMF	=	**28** 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.

Saskatchewan Crescent & McPherson Avenue (Pedestrian-Activated Signal):

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	=	3.0	points	= indicating there is a 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	=	500	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 = 22.5563 points.
9

5. **Pedestrian/Vehicle Volume Priority Points:**

H	=	5.0	= (hours) duration of counting period.
Ps	=	163.0	= total number of children, teenagers, seniors and/or impaired counted.
Pa	=	0.0	= total number of adults counted.
Pw	=	244.5	= weighted average of pedestrians crossing the main street.
Pcm	=	48.9	= weighted average hourly pedestrian volume crossing the main street.
V	=	499.0	= volume of traffic passing through the crossing(s).
Vam	=	99.8	= average hourly volume of traffic passing through the crossing(s).
VOLF	=	9.8 points	= Vam x Pcm / 500

6. **Satisfaction of Installation Criteria:**

SUMF = (LANF + MEDF + SPDF + LOCF + VOLF)

SUMF	=	**34**	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.

Saskatchewan Crescent & McPherson Avenue (Active Pedestrian Corridor):

Time (15 min int.)	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	Sr.'s	Total	15 min	30 min	Points	(1=Yes)	Periods
7:00												
7:15												
7:30												
7:45												
8:00	26	26	11				11	11	11	286		
8:15	17	43	12				12	12	23	989		
8:30	18	35	11				11	11	23	805		
8:45	14	32	22				22	22	33	1,056		
9:00		14							22	308		
9:15												
9:30												
9:45												
AM Totals	75		56				56					
11:30	15		2				2	2				
11:45	24	39	2				2	2	4	156		
12:00	15	39	4				4	4	6	234		
12:15	20	35							4	140		
12:30	12	32	5				5	5	5	160		
12:45	22	34	5				5	5	10	340		
13:00	21	43	9				9	9	14	602		
13:15	19	40	10				10	10	19	760		
Noon Totals	148		37				37					
14:00												
14:15												
14:30												
14:45												
15:00	31	31	10				10	10	10	310		
15:15	45	76	14				14	14	24	1,824		
15:30	36	81	12				12	12	26	2,106		
15:45	34	70	4				4	4	16	1,120		
16:00	29	63	6				6	6	10	630		
16:15	33	62	9				9	9	15	930		
16:30	36	69	6				6	6	15	1,035		
16:45	32	68	9				9	9	15	1,020		

17:00		32							9	288		
17:15												
17:30												
17:45												
18:00												
18:15												
18:30												
18:45												
19:00												
19:15												
19:30												
19:45												
20:00												
20:15												
20:30												
20:45												
PM Totals	276		70				70					
Totals	**499**		**163**				**163**					
			100 %				100 %					

West Crosswalk =	**60**
East Crosswalk=	**103**

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

SUMMARY

Total Warranted PC Points:		**or**	**/ period**
Highest PC point value:	**2,106**	**at**	
Average PC point value:	**1,007**		
No. of periods warranted:			

Appendix C

Recommendation Review Matrix

Decision Matrix – Recommendations proposed at first follow-up meeting (September 2014)

Item	Location	Solution	Reason	Northwest quadrant		Southeast quadrant		Northeast quadrant		Southwest quadrant		Other	Decisions
				Shirley's group	Konrad's group	Mark's group	Lanre's group	Larry's group	Goran's group	Chelsea's group	Anjali's group		
1	Clarence Avenue & 8th Street	Major intersection review	address concerns at 8th Street & Clarence Avenue, and address left turn into alley behind Scotiabank					no issues with signal timing; build median to prevent SBLT into alley	something to prevent left turn in alley				Carried. Will be included as part of Clarence Avenue Corridor Review (8th Street to College Drive).
2	8th Street W & Poplar Crescent	Install median island (west leg) with zebra crosswalk	reduce speeds; improve pedestrian safety to park		Group was supportive. Measure effective.							motorists proceeding westerly and turning right or north onto Poplar Crescent who can't see the intersection before they turn into it because of the chicane in 8th Street W. Would it be possible to use some other traffic calming device at this intersection in addition to the proposed pedestrian safeguards?	Carried. Add curb extension on northeast corner to slow drivers turning from 8th St (westbound) onto Poplar Cres
3	9th Street & McPherson Street	Install permanent roundabout	reduce traffic volumes on 9th Street		Disagree. 5 group members against, 1 for. A four-way stop is preferred.					Most not in favour; consider closure at Idylwyld Drive or 4-way stop instead; 9th Street & Melrose Avenue is the issue	traveling through roundabout without yielding; not safe for peds; not adequate by itself; remove freeway access at 9th Street		Revisions needed.
4	Broadway Avenue & 9th Street	Install pedestrian-activated signal	improve pedestrian safety					consider less measures first; more enforcement	Try improved signage/pavement markings first				Carried.

Decision Matrix Continued

Item	Location	Solution	Reason	Northwest quadrant		Southeast quadrant		Northeast quadrant		Southwest quadrant		Other	Decisions
				Shirley's group	Konrad's group	Mark's group	Lanre's group	Larry's group	Goran's group	Chelsea's group	Anjali's group		
5	Clarence Avenue & 11th Street	Install active pedestrian corridor	improve pedestrian safety near playground, community centre, daycare, grocery store etc			ped-act signal instead	most in favour						Carried.
6	Dufferin Avenue & 11th Street	Upgrade yield to stop signs; permanent curb extension (northwest corner)	enhance compliance; improve pedestrian safety			ensure cyclist accessible							Revisions needed.
7	Eastlake Avenue & 10th Street	Install curb extension (westbound); Upgrade yield signs to stop signs	Reduce speeds; enhance compliance; improve safety	not in favour of curb extension	Difficult to see traffic on 10th Street from Eastlake Avenue.								Revisions needed.
8	Main Street & Eastlake Avenue	Install 4-way stop	warranted based on high collisions		Group was supportive.								Revisions needed.
9a	Main Street & Clarence Avenue / Main Street & Albert Avenue	No changes recommended	existing is adequate					Other options to reduce volume & speed - roundabout, speed hump, roundabout at Albert Street; consider people on adjacent streets	Other options - roundabout				Revisions needed.
9b	Main Street & Clarence Avenue / Main Street & Albert Avenue	Install 4-way stop at Albert Avenue	high traffic volumes; address shortcutting on Main Street between Clarence Avenue & Broadway Avenue					this is best option of the recommended	this is best option				Revisions needed.

Decision Matrix Continued

Item	Location	Solution	Reason	Northwest quadrant		Southeast quadrant		Northeast quadrant		Southwest quadrant		Other	Decisions
				Shirley's group	Konrad's group	Mark's group	Lanre's group	Larry's group	Goran's group	Chelsea's group	Anjali's group		
9c	Main Street & Clarence Avenue / Main Street & Albert Avenue	Install raised median island at Albert Avenue (opening for pedestrians and cyclists)	high traffic volumes; address shortcutting on Main Street between Clarence Avenue & Broadway Avenue				50/50						Revisions needed.
9d	Main Street & Clarence Avenue / Main Street & Albert Avenue	Install right-in/right-out islands at Clarence Avenue	high traffic volumes; address shortcutting on Main Street between Clarence Avenue & Broadway Avenue; reduce collisions occurring from through movement				50/50						Revisions needed.
10	Saskatchewan Crescent E & McPherson Avenue	Install textured crosswalk & enhance pedestrian signs; parking restrictions (east leg)	improve pedestrian safety; connects to park		Stop sign is too far back on McPherson Avenue. Should be a 3-way stop. Not in favour of textured crosswalk.								Carried. Added parking restrictions on north side of intersection inlcuding 10m on either side. Removed textured crosswalk.
11	Saskatchewan Crescent East - east of McPherson Ave	Install advanced warning pedestrian sign	improve pedestrian safety; connects to park		Group agreed.								Removed. Advanced sign only necessary on curves, hills, and other reduced sightlines.

Decision Matrix Continued

Item	Location	Solution	Reason	Northwest quadrant		Southeast quadrant		Northeast quadrant		Southwest quadrant		Other	Decisions
				Shirley's group	Konrad's group	Mark's group	Lanre's group	Larry's group	Goran's group	Chelsea's group	Anjali's group		
12	Lansdowne Avenue & 14th Street (Temperance Street)	Remove parking around island and trim hedges; install curb extension & standard pedestrian crosswalk at 14th Street & Lansdowne Avenue	improve visibility, enhance compliance, improve pedestrian safety crossing to café			no sidewalk on Lansdowne south of 14th Street (west side); trim trees at yield signs; close the median; onstreet visibility issues because of parking (north end)	no sidewalk on Lansdowne south of 14th Street (west side); trim trees at yield signs; close the median; onstreet visibility issues because of parking (north end)						Revisions needed.
13	Clarence Avenue & 14th Street	Install zebra crosswalk & enhance pedestrian signs	improve pedestrian safety along major transit route; enhanced visibility			install light for peds but consider a traffic stop light (ped-activated)	not effective; install ped-act signal						Carried.
14	12th Street & Lansdowne Avenue	Install median island (west leg)	reduce speed; improve pedestrian safety along transit route; improve visibility			mostly large trucks parking on 12th Street obstructing view; remove parking around Lansdowne to improve sightlines	concerned for buses making turn; consider curb extension						Carried. Added parking restrictions on northeast corner of 12th Street to improve visibility.
15	Broadway Avenue	Expand school zone from 8th Street to 12th Street	reduce speed in high pedestrian area					reduced speed 24-7	reduced speed limit 24-7				Carried.
16	Eastlake Avenue & 11th Street	Install zebra crosswalk (north & south sides)	improve pedestrian safety	narrow street, can't cross 11th Street, speeding, trucks; 4-way stop	Should be a 4-way stop. Crosswalk should be on all sides! School nearby.					4-way stop; trees; zebra crosswalks on all sides			Carried. Existing north-south curb extensions. 4-way stop not warranted.
17	Saskatchewan Crescent West between Idylwyld Crescent & 8th Street W	Install curb extension & midblock crossing	reduce speeds; improve pedestrian safety to park		Supportive, however there is concern with cyclists being pushed into traffic lane - should have cyclist opening in curb extensions throughout the city.								Carried.

Decision Matrix Continued

Item	Location	Solution	Reason	Northwest quadrant		Southeast quadrant		Northeast quadrant		Southwest quadrant		Other	Decisions
				Shirley's group	Konrad's group	Mark's group	Lanre's group	Larry's group	Goran's group	Chelsea's group	Anjali's group		
18	Saskatchewan Crescent W & 8th Street W	Install zebra crosswalk (north & south sides)	improve pedestrian safety connecting to parks		Supportive.								Carried.
19	Dufferin Avenue & 9th Street	Upgrade yield signs to stop signs	enhance compliance; improve safety; enhance sightlines										Revisions needed.
20	Dufferin Avenue & 10th Street	Upgrade yield signs to stop signs	enhance compliance; improve safety										Revisions needed.
21	Temperance Street & 14th Street	Upgrade yield signs to stop signs	enhance compliance; improve safety										Revisions needed.
22	Broadway Avenue	Add 'chirping' to traffic signal crossings (sound adjusted accordingly)	included in 2015 Traffic Operations										Carried.
23	Various locations	Increased parking enforcement	prevent parking too close to intersections, alleys, & driveways obstructing drivers view; parking in restricted zones (particularly near schools and during events); improve safety	enforcement parking around schools & alleys									Carried.

Decision Matrix – Additional Concerns received during first follow-up meeting (September 2014)

Item	Location	Concerns	Decision
1	Broadway Avenue & 10th Street	Bulk Cheese Warehouse- traffic backed up/bad due to angle parking; remove angle parking up to alley from Broadway Avenue on 10th Street; widen curbs	Site check conducted. No issues noted.
2	Broadway Avenue at 10th Street & 11th Street	More time to cross	Forwarded to Traffic Operations for further consideration.
3	Broadway Avenue & 8th Street	Install countdown timer	Forwarded to Traffic Operations for further consideration.
4	Broadway Avenue & 12th Street	Left arrow needed	Forwarded to Traffic Operations for further consideration.
5	Eastlake Avenue (Saskatchewan Crescent to 12th Street)	Trees covering "no parking" signs	Forwarded to Parks Division for further consideration.
6	Victoria Avenue	Install pedestrian-activated crossing at 9th Street; improve crossing safety with opening of bridge; raceway potential	Traffic conditions on Victoria Avenue will be reviewed when bridge opens.
7	Clarence Avenue & 12th Street	Grocery store on corner has gotten busier; full parking lot & high traffic volumes	Comments will be included in Clarence Avenue Review (8th Street to College Drive).
8	Various locations	Traffic signs on telephone poles/power poles can go unnoticed; steel poles are better	Noted.
9	Clarence Avenue & 12th Street	Consider median islands at intersections	Comments will be included in Clarence Avenue Review (8th Street to College Drive).
10	Clarence Avenue & College Drive	Takes 4.5 mins for pedestrian light to activate across Clarence	Comments will be included in Clarence Avenue Review (8th Street to College Drive).
11	Victoria Bridge	Combined use - Pedestrian/cyclists only, except when other bridges are closed for repairs or maintenance - then open Victoria bridge for vehicles.	Noted.
12	9th Street & Main Street between Victoria Avenue & Melrose Avenue (near Las Palapas & Homestead)	high parking; change to RPP zone; wants RPP to be changed to less than 10 block face requirement	Forwarded to Parking Services for further consideration.
13	Various locations	Install space into curb extensions for cyclists	Noted.

Decision Matrix –Revised recommendations proposed at second follow-up meeting (January 2015)

Item	Location	Proposed Improvement	Reason	Comments	Decision
1	**9th Street**				
a	9th Street & Idylwyld Drive / Lorne Avenue	Install directional closure	reduce traffic volumes on 9th Street	group was generally in support; address location of trees and houses; pavement marking on Idylwyld Drive ramp (Lorne Avenue) need to be improved; parking narrows the road; block off intersection entirely	Carried. Civic Divisions will be consulted to verify location is not effecting any services, trees, private property etc. Changes will be permanent.
b	9th Street & McPherson Avenue	Remove temporary roundabout at McPherson Ave & 9th Street	directional closure at 9th Street & Idylwyld Drive / Lorne Avenue		Carried.
2	**Lansdowne Avenue / 14th Street / Temperance Street**				
a	Lansdowne Avenue	Install curb extensions at Temperance Street & narrow centre median between 14th Street & Temperance Street	reduce speed by narrowing street and sharpening angles to turn at intersection	increase traffic noise due to accelerating/decelerating at Lansdowne Avenue (northbound); space to turn left may be too sharp; if signs are removed on 14th Street cyclists may be at risk; perhaps a yield sign on Landsdowne NB and temperance instead of a stop sign would help to address some concerns over added noise from the buses having to navigate the more pronounced corner; changes will increase traffic on Lansdowne Avenue; collisions are low therefore doesn't back up the proposal; install flashing yellow lights instead; cars have been hit on Temperance Street; drivers are courteous towards pedestrians; concerned about the headlights shining into houses; talk to bus drivers to slow down; safer for children; University traffic using the route since there are no stops from College Drive; install a stop sign on Temperance St; consider impact of noise pollution with stop sign; impacts on parking; costs	Carried with the following modifications: curbing will be installed to allow left turns and existing turning movement for buses (right turn northbound from Lansdowne Avenue & left turn southbound from Temperance Street). Remove additional curbing along median on Lansdowne Avenue between 14th Street and Temperance Street. Curb extensions will be installed temporarily to assess effectiveness. Install yield sign northbound at Lansdowne Avenue & Temperance Street. Install "no parking" signs to ensure crosswalks are visible.
b	14th Street	Closure between Temperance Street & Lansdowne Avenue with opening for cyclists and pedestrians	reduce number of turning movements within small area (less turning movements = less points of conflict)		Carried. Remove yield signs at 14th Street & Temperance Street and replace with eastbound stop sign on 14th Street. Speed studies will be conducted before and after installations to determine effectiveness. Cafe owners will be contacted prior to changes. Parking will be restricted within 10m of all intersections as per Bylaw 7200. Amount of parking will be minimally effected.

Decision Matrix Continued

Item	Location	Proposed Improvement	Reason	Comments	Decision
3	**"Core Area" bound by 12th Street, 8th Street, Victoria Avenue, & Clarence Avenue**				
a	Dufferin Avenue & 9th Street	Install roundabout	Reduce speeds; improve safety; allows U-turns to circulate for parking	See "Comments on Roundabouts"	Upgrade yield signs to stop signs (Original recommendation from September/14 meeting)
b	Dufferin Ave & Main Street				No recommendations.
c	Dufferin Avenue & 10th Street				Upgrade yield signs to stop signs (Original recommendation from September/14 meeting)
d	Dufferin Avenue & 11th Street				Upgrade yield to stop signs; install permanent curb extension on northwest corner. (Original recommendation from September/14 meeting)
e	Eastlake Avenue & 10th Street				Upgrade yield signs to stop signs. (Original recommendation from September/14 meeting)
f	Eastlake Avenue & Main Street				Install 4-way stop (Original recommendation from September/14 meeting)
g	Clarence Avenue between 8th Street & 12th Street	Left turn restrictions - northbound	Reduce traffic volumes on local streets	Restrictions will make speeding worse than it already is; left turn restrictions will make it difficult to get into the area but we want people coming into this community, as residents and shoppers; keep left turns except for Main Street; install signs indicating cyclists can turn left; traffic signals at 8th Street need to be reviewed (add protected left turn)	Clarence Avenue between 8th Street and College Drive will be reviewed separately.
h	Victoria Avenue between 8th Street & Victoria Bridge	Left Turn restrictions - southbound	Reduce traffic volumes on local streets	Don't know the future of Victoria Bridge so it's difficult to make these decisions now; once bridge opens Victoria Avenue will have high traffic volumes; left turn restrictions will make it difficult to get into the area. We want people coming into this community, as residents and shoppers; pedestrian crossings are a concern; consider options to divert traffic to and from Victoria Bridge; restrictions will effect businesses on Broadway Avenue; install sign indicating that cyclists can turn left	Victoria Avenue between 8th Street and Victoria Bridge will be reviewed after bridge opens. Install 2-way stop at Eastlake Avenue & 10th Street (Original recommendation from September/14 meeting). Install 4-way stop at Eastlake Avenue & Main Street (Original recommendation from September/14 meeting).

Decision Matrix – Additional Concerns received during second follow-up meeting (January 2015)

Item	Location	Concerns	Decision
1	Back lanes (particularly near Broadway Avenue, 11th Street & 12th Street)	shortcutting; pedestrian safety concerns at accesses; particularly problematic where hedges obscure sidewalk (behind 600 block of Eastlake Avenue); install speed bumps put at the end of these lanes (they are all paved) or at the very least, stop signs or something to remind motorists that they first have to stop for pedestrian traffic on the sidewalks and not just stop for vehicular traffic on the road; not enough gravel	Comments forwarded to Bylaw officer for hedge trimming. Traffic calming not recommended in back lanes. No recommendations at this time.
2	12th Street	Reduce traffic	12th Street is a major collector, and as such is designed to carry higher traffic volumes; no changes recommended.
3	Main Street	Speeding / shortcutting	Main Street Review between Broadway Avenue and Cumberland Avenue
4	8th Street W – Saskatchewan Crescent to Coy Ave	Sidewalk needed on south side - children use route to get to and from school	this is located in Buena Vista and therefore will be included in the Buena Vista Neighbourhood Traffic Review for further consideration