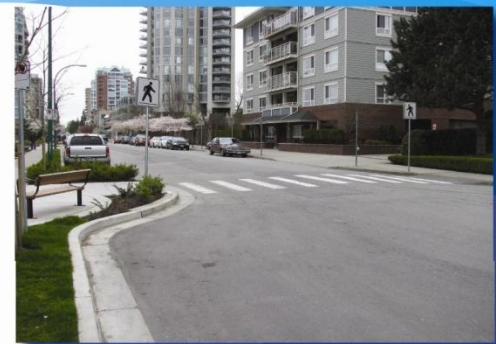




Lower Lonsdale West Traffic Calming Plan



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1.0 INTRODUCTION

In 2001, the City of North Vancouver adopted a Community Traffic Calming Program in response to concerns expressed by residents regarding speeding, pedestrian safety, short-cutting traffic and other safety issues on neighbourhood streets. The Community Traffic Calming Program, which was updated in 2004, identified twelve neighbourhoods throughout the City for the purposes of preparing Traffic Calming Plans. To date, Traffic Calming Plans have been prepared for six of these neighbourhoods. Lower Lonsdale West is the seventh neighbourhood in the City for which a Traffic Calming Plan has been developed.

This report describes the Traffic Calming Plan developed for the Lower Lonsdale West neighbourhood. The primary objectives of the Traffic Calming Plan are:

- Safety — make neighbourhood streets safer for everyone, including pedestrians, cyclists, children and motorists.
- Livability — restore and enhance the livability of the neighbourhood.

The Traffic Calming Plan was developed by a consulting team, with the involvement of neighbourhood residents and with the assistance of City staff. Development of the plan was initiated in March, 2009

The boundaries of the Lower Lonsdale West neighbourhood are illustrated in Figure 1. The neighbourhood is bounded by Lonsdale Avenue to the east, 13th Street and Keith Road to the north, Forbes Avenue and the Squamish Nation lands to the west, and the waterfront to the south.

Figure 1 – Study Area

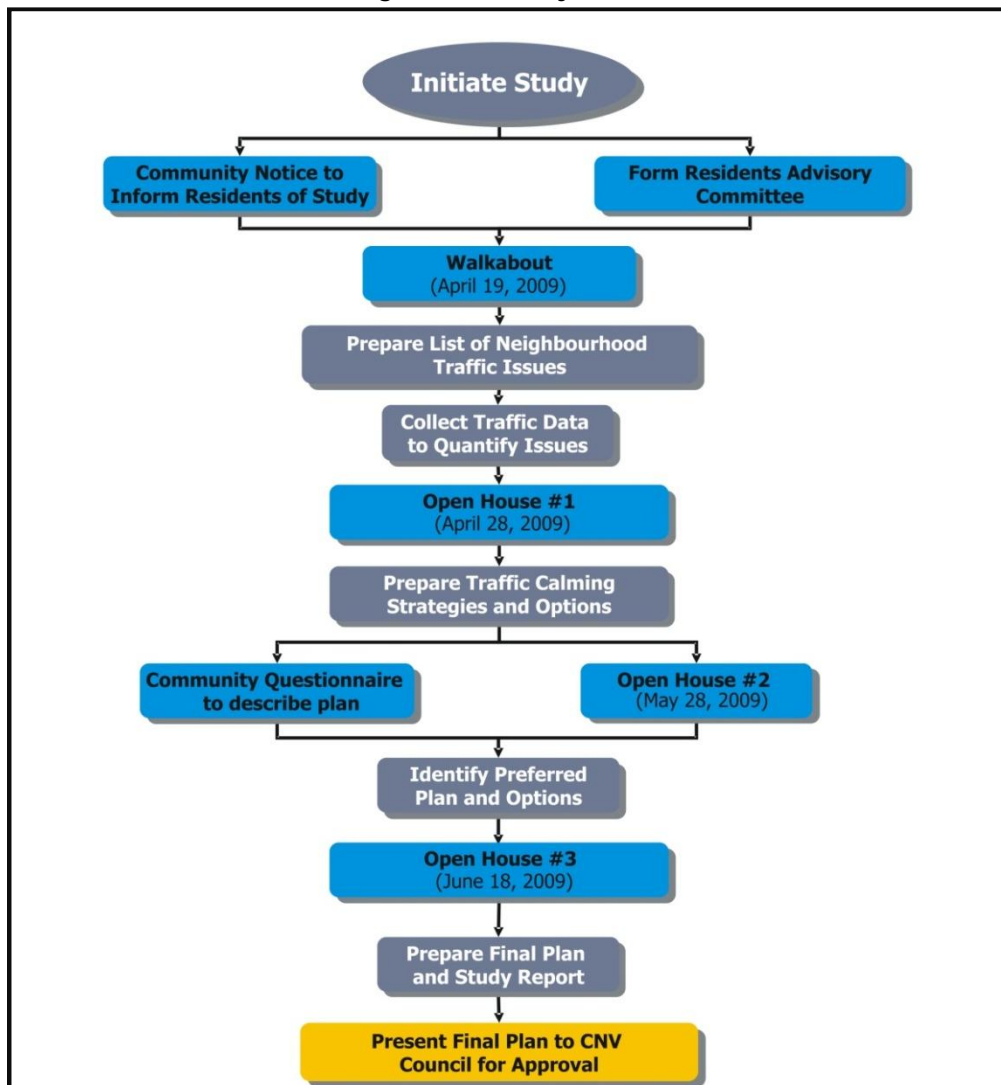


2.0 STUDY PROCESS

The most important aspect of developing a neighbourhood Traffic Calming Plan is involving the entire community in the process — residents, business owners and stakeholders. The people who live and work in the area know better than anyone what the traffic and safety issues are, and provide an essential perspective on the practicality of potential traffic calming solutions in their neighbourhood.

As shown in Figure 2 and described below, residents and other members of the community had several opportunities to provide input and suggestions for the development of the Traffic Calming Plan.

Figure 2 – Study Process



The following community events and activities were undertaken in the Lower Lonsdale West neighbourhood:

- A Neighbourhood Traffic Residents' Association (NTRA) was established in March, 2009 to assist the consulting team and City staff in identifying traffic and safety issues, involving the community, and developing the Traffic Calming Plan. The NTRA was comprised of eight resident volunteers from all areas of the neighbourhood. The NTRA assisted consultants in identifying neighbourhood issues, soliciting input from other residents and reviewing various solutions to include in the Traffic Calming Plan.
- Stakeholder input. In order to develop a Traffic Calming Plan that addresses the concerns of all members of the community, several stakeholders were contacted for their input regarding the plan, including the North Vancouver RCMP, Ambulance Services, North Vancouver Fire Department, the North Vancouver School Board as well as the local schools within the neighbourhood (St. Edmund's Elementary School, Queen Mary Elementary School, and St. Thomas Aquinas High School), TransLink, the Squamish Nation, the Lower Lonsdale Business Association, and the Joint Bicycle Advisory Committee (JBAC). No objections to the Traffic Calming Plan were raised by stakeholders, and a number of implementation suggestions were provided.
- A neighbourhood walkabout was held on Sunday, April 19, 2009. The walkabout consisted of a three-hour tour of the neighbourhood, where residents were invited to walk with consultants and City staff and identify traffic and safety issues in the neighbourhood. The walkabout was advertised to residents and businesses with a flyer showing a map of the neighbourhood, the walkabout route and meeting times along the route (a copy of the flyer is included in the appendices.) Approximately 20 residents, NTRA members, City staff and the consultants participated in the walkabout. Compared with other neighbourhoods where walkabouts have been conducted, this number of participants reflects a good level of interest from the community.
- Information on the web. The City established a dedicated web page for the Lower Lonsdale West Neighbourhood Traffic Calming Plan. Information which was provided throughout the development of the plan included the walkabout notice, the questionnaire from the first open house, the community questionnaire, the results of the community questionnaire, display boards from all three open houses, traffic data, and the City's *Traffic Calming Program*.

- An email address and telephone number was provided for residents who wished to communicate via the internet. All calls and e-mails were followed up with a telephone or email response.
- An open house was held on April 28, 2009 at John Braithwaite Community Centre. Approximately 20 residents attended the open house to learn about the traffic calming process, view displays of traffic data from their neighbourhood and find out how traffic calming measures could be used to improve safety and livability in the neighbourhood. Attendees were also asked to complete a questionnaire to identify additional traffic issues and indicate which traffic calming measures they would like to see in the neighbourhood (a copy of which is included in the appendices).

A community questionnaire was distributed to every household and business in the neighbourhood, describing the proposed Traffic Calming Plan. Residents and business owners were asked to indicate whether they supported the plan, felt neutral, or did not support the plan. They were also asked to indicate their support for localized parking restrictions at intersections to improve safety, and to indicate their support for traffic circles and driver feedback signs in the neighbourhood. Approximately 6,100 questionnaires were distributed to the community and 297 completed questionnaires were returned by neighbourhood residents. This represents an overall response rate of approximately 5%, which is slightly lower than the response rate in other neighbourhoods, but represents the largest absolute number of responses in any Traffic Calming Plan to date. A copy of the community questionnaire is included in Appendix C.

- A second open house was held on May 28, 2009 at John Braithwaite Community Centre, coinciding with the distribution of the community questionnaire. The open house provided residents with an opportunity to obtain more information regarding the proposed traffic calming plan, and to ask questions of NTRA members, City staff and the consultants. Approximately 20 people attended the open house.
- A third open house was held on June 18, 2009 at John Braithwaite Community Centre to present the results of the survey and the preferred Traffic Calming Plan. Approximately 30 people attended the open house.

Throughout the process, NTRA members provided a vital link to the community, and were involved in all community activities as well as development of the Traffic Calming Plan. The proposed Traffic Calming Plan was reviewed by NTRA members prior to distribution to residents.

The consultants and City staff wish to thank NTRA members for their involvement and valuable contribution.

As described in the City's *Traffic Calming Program*, a permanent Neighbourhood Transportation Committee (NTC) could be established following approval of the Traffic Calming Plan. The NTC would liaise with City staff in monitoring the implementation of the plan and in identifying any additional problems in follow-up study areas. The NTC would also function as a "sounding board" for all concerns and requests for transportation improvements from residents and other members of the community.

3.0 NEIGHBOURHOOD CHARACTERISTICS

There are approximately 6,100 households and businesses in the neighbourhood, including businesses along Lonsdale Avenue, Esplanade Avenue, and 3rd Street. In addition, there are a number of community facilities, including John Braithwaite Community Centre, Queen Mary Elementary School, St. Edmund’s Elementary School and St. Thomas Aquinas High School. There are also a number of parks in the neighbourhood, including Semisch Park, Waterfront Park, Victoria Park, McEvoy Park, Chief August Jack Park, and Ottawa Gardens (see Figure 3).

Figure 3 – Neighbourhood Characteristics



The neighbourhood is characterized predominantly by a rectangular grid network of east-west streets and north-south roadways. The road classification system is illustrated in Figure 4 and includes:

- Major arterial roads include Lonsdale Avenue, Esplanade Avenue, Forbes Avenue, Keith Road west of Mahon, and 13th Street east of Mahon Avenue;
- Minor arterial roads include Chesterfield Avenue, 3rd Street, and Keith Road east of Mahon Avenue;
- Collector roads include Carrie Cates Court, Chesterfield Avenue south of Esplanade Street, and Lonsdale Avenue south of Esplanade Street; and
- Local roads, which include all other roads in the neighbourhood.

Figure 4 — Road Network Classification



The identification of major arterial roads and minor arterial roads is particularly important, as the City's Traffic Calming Policy states that traffic calming measures are generally not appropriate on arterial roads.

In addition, there are several 30 km/h zones within the neighbourhood, including Keith Road between Forbes Avenue and Jones Avenue, Keith Road between Mahon Avenue and Chesterfield Avenue, Mahon Avenue between 5th Street and 6th Street, 6th Street west of Mahon Avenue, 4th Street between Chesterfield Avenue and Lonsdale Avenue, and 2nd Street between Mahon Avenue and Chesterfield Avenue.

Figure 4 also indicates transit routes and bicycle routes in the neighbourhood:

- Buses operate along Lonsdale Avenue, Chesterfield Avenue (between Esplanade and 3rd Street), Forbes Avenue (between Esplanade and 3rd Street), and Esplanade Street; and
- Designated bicycle routes include Chesterfield Avenue and Esplanade Avenue. Bicycle routes are also planned on Keith Road/13th Street, Mahon Avenue/Jones Avenue between 4th Street and Keith Road, Forbes Avenue, 4th Street, and a section of 1st Street between Forbes Avenue and Mahon Avenue, and Mahon Avenue between Esplanade Street and 1st Street.

It should also be noted that the only designated truck routes in the neighbourhood are Lonsdale Avenue, Forbes Avenue, and Esplanade Street.

Figure 5 summarizes the existing roadway infrastructure in the Lower Lonsdale West Neighbourhood. This includes:

- Traffic signals on Lonsdale Avenue and Chesterfield Avenue at Esplanade Street, 3rd Street, and 13th Street respectively, as well as on Forbes Avenue at 3rd Street;
- Special crosswalks on Esplanade Street at Semisch Avenue and West 13th Street at Mahon Avenue;
- Pedestrian activated signal on Lonsdale Avenue at 8th Street;
- Roundabout at Keith Road and Chesterfield Avenue;
- Speed humps on Mahon Avenue between 5th Street and 6th Street and on 6th Street between Mahon Avenue and Chesterfield Avenue;
- Curb extensions on Chesterfield Avenue at 5th Street, 2nd Street, and 1st Street;
- 4-way stops at several intersections on Chesterfield Avenue and Mahon Avenue; and
- Marked pedestrian crosswalks at several locations throughout the neighbourhood.

Figure 5 — Roadway Infrastructure



4.0 OTHER PLANS AND STUDIES

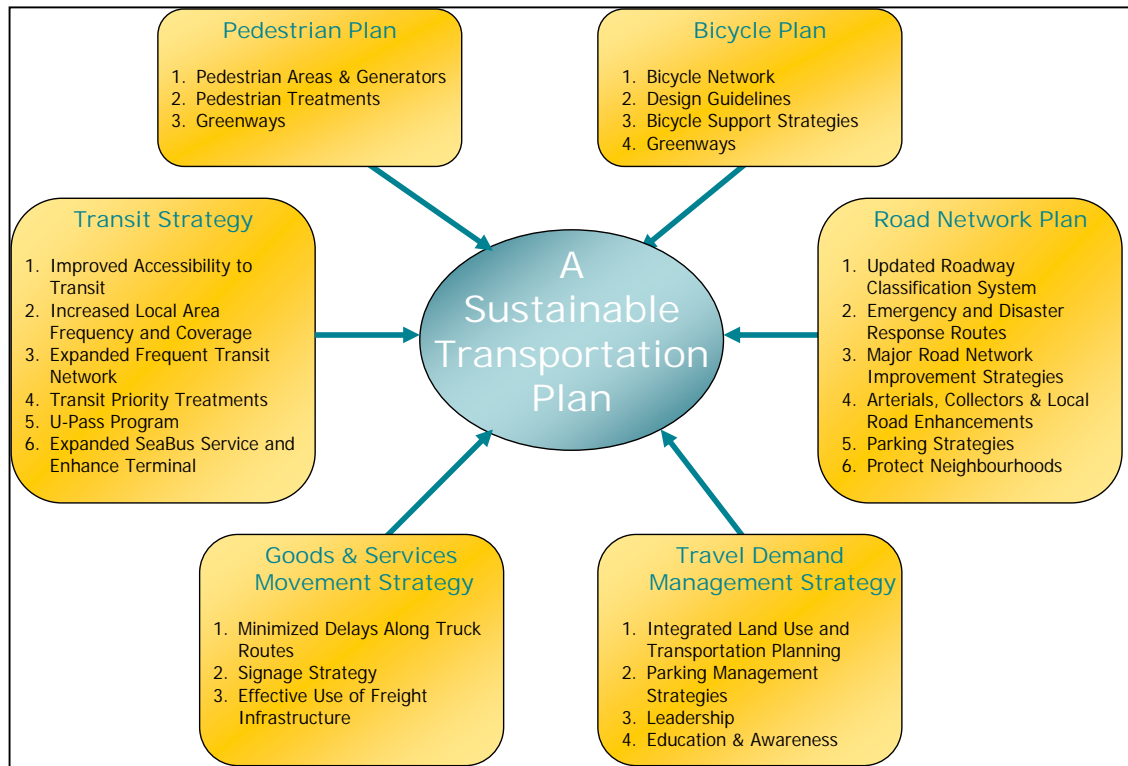
The City has adopted or is currently conducting a number of plans and policies that are relevant to this study. Most recently, the City adopted a Long-Range Transportation Plan, with the following goals being used to guide and measure the success of the Transportation Plan:

- **Livability.** The Transportation Plan will contribute toward the City's overall Vision of becoming a vibrant, diverse and highly liveable community, where quality of life and community well-being are vital.
- **Mobility.** The Transportation Plan will support the safe, efficient, and accessible movement of people, goods, and services throughout the City and beyond our boundaries.
- **Integration.** The Transportation Plan will support the development and integration of all modes of travel in order to offer more choice to the residents, workforce, and visitors of the City.
- **Affordability.** The Transportation Plan will recognize the financial constraints of the City and promote the development of transportation infrastructure and services that will best support the goals of the Plan.
- **Environment.** The Transportation Plan will support alternative means of transportation, namely walking, cycling and transit and promote strategies to manage travel demand in an attempt to reduce local greenhouse gas emissions.

The development of Traffic Calming Plans directly supports each of these five goals. In addition, one of the key directions in the Transportation Plan was to "Protect Neighbourhoods", which includes promoting the development of traffic calming plans to help achieve the goals of the Transportation Plan and broader City goals outlined in the OCP (see Figure 6).

In addition, the Transportation Plan identified existing and projected traffic volumes in 2021 along the collector and arterial roads within the City (see Figure 7). The projections show modelled traffic volumes currently and projected forward to the year 2021. The traffic forecasts indicate that the most significant volumes are on the major east-west roads through the neighbourhood, such as Esplanade Street, 3rd Street, and Keith Road / 13th Street, each of which have existing and projected traffic volumes of between 10,000 – 15,000 vehicles per day. The model also indicates that Lonsdale Avenue south of Keith Road has existing and projected traffic volumes of under 10,000 vehicles per day, with Chesterfield having existing projected volumes of 6,000 and 7,000 vehicles per day, respectively.

Figure 6 – Key Features of the Long-Term Transportation Plan

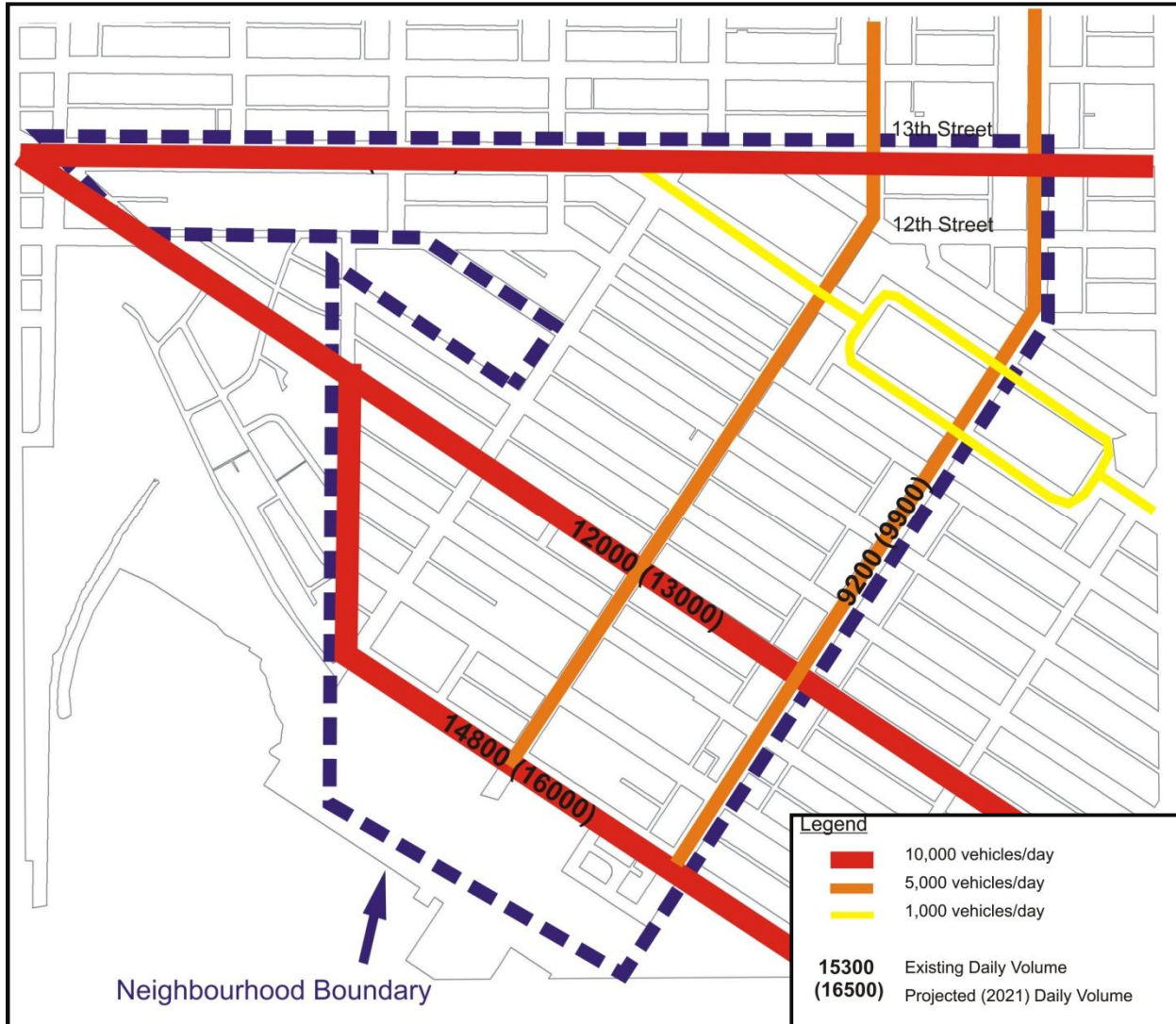


The City is also currently involved in several studies in the Lower Lonsdale West neighbourhood that should be considered as part of the Traffic Calming Plan. These include:

- Forbes Avenue Bicycle Facilities Study, which involves provision of bicycle facilities on Forbes Avenue. City staff are currently exploring possible design options.
- Chesterfield Avenue Intersection Safety Study, which proposes changes to traffic patterns at Chesterfield Avenue and Carrie Cates Court. This study recommends removing the stop sign for the northbound traffic on Chesterfield Avenue and placing it instead for westbound traffic on Carrie Cates Court.
- 2nd Street Streetscape Improvements, which proposes curb extensions at 2nd Street and Lonsdale Avenue, one curb extension at the northeast corner of 2nd Street and Chesterfield Avenue (to complement the existing curb extension at the southeast corner of this intersection), and curb extensions at the lane.
- Lonsdale Avenue Safety Study, which is being conducted jointly with ICBC for the Lonsdale Corridor between Esplanade Street and 8th Street / 11th Street; and
- 4th Street Sidewalk Improvements, which involved a new sidewalk on the north side of 4th Street between Forbes Avenue and Mahon Avenue, which has recently been completed.

- 4th Street Bicycle Improvements, which involves providing bicycle facilities along 4th Street and including intersection treatments at key intersections, such as Chesterfield Avenue as per the Bicycle Master Plan.

Figure 7– Existing and Projected Daily Traffic Volumes



5.0 TRAFFIC AND SAFETY ISSUES

Residents in the Lower Lonsdale West neighbourhood reported problems regarding traffic short-cutting through the neighbourhood, speeding, pedestrian safety, stop sign compliance and other intersection safety issues. These issues are illustrated in Figure 8, and are documented in detail in Appendix A.

Figure 8 — Reported Issues



Based on reports from residents, data were collected regarding traffic volumes, traffic speeds and collisions, to provide a basis for developing the Traffic Calming Plan. Traffic volume and speed data were collected for a total of 34 locations on local, collector and arterial roads. Volume and speed data were typically collected for a minimum of four weekdays (96 hours). Collision data were also reviewed for a period of 5 years from 2003 through 2008.

Significant issues are described below, as identified by residents and stakeholders and — where applicable — verified through data collection. A detailed summary of issues is included in the appendices, as well as a summary of traffic volume, speed and collision data.

5.1 Vehicle Speeds

Speed data were collected both with automatic tube counters, which use tubes placed across the road, and with NuMetric counters, which measure the magnetic field distortion caused by vehicles. Both data collection methods can measure vehicle speeds and count the numbers of vehicles. Vehicle speeds are presented as 85th percentile speeds. This is the standard measure of vehicle speed, and represents the speed at or below which 85% of vehicles are travelling. This means that 15% of vehicles are travelling faster than the 85th percentile speed.

The speed limit on neighbourhood streets is 50 km/h, except for several 30 km/h zones (indicated in Figure 4). For the purposes of developing the Traffic Calming Plan, any 85th percentile speeds observed in excess of the applicable speed limits are considered to indicate that there is speeding issue.

Speeds over the posted speed limit were observed on several neighbourhood streets, including

- 2nd Street between Chesterfield Avenue and Mahon Avenue, where observed 85th percentile speeds were 50.8 km/h in the westbound direction and 54.5 km/h in the eastbound direction over a 24-hour period;
- 3rd Street, where observed 85th percentile speeds over a 24-hour period west of Mahon Avenue were 50.5 km/h westbound and 54.1 km/h eastbound, respectively; and between Mahon Avenue and Chesterfield Avenue, where 85th percentile speeds were 52.4 km/h westbound and 55.2 km/h eastbound, respectively;
- 4th Street east of Mahon, where observed 85th percentile speeds were 55.4 km/h eastbound and 51.8 km/h westbound, respectively over a 24-hour period;
- 6th Street west of Mahon, where 85th percentile speeds were 52.0 km/h in the westbound direction over a 24-hour period (although it should be noted that subsequent to this count, a speed hump and raised crosswalk have been added to 6th Street west of Mahon);
- Chesterfield Avenue between 4th Street and 5th Street, where 85th percentile speeds were 51.9 km/h in the southbound direction and 50.6 km/h in the northbound direction over a 24-hour period;
- In the 30 km/h zones on Mahon Avenue between 5th Street and 6th Street; on Keith Road between Mahon Avenue and Chesterfield Avenue; on 4th Street between Chesterfield Avenue and Lonsdale Avenue; and on 6th Street between Jones Avenue and Mahon Avenue; and

- Several other locations where 24-hour 85th percentile speeds were slightly above 50 km/h.

Detailed speed data is presented in Appendix B.

5.2 Traffic Volumes

Because of the central location of the Lower Lonsdale West neighbourhood in the City, its proximity to the Lonsdale Avenue and Esplanade Street commercial areas, its grid street network, and high population, some local streets experience traffic volumes which are higher than usual for typical local streets (typical volumes for local streets are less than 1,000 vehicles per day). Local roads with higher traffic volumes include:

- 1st Street, where daily traffic volumes range from approximately 2,800 to 3,300 vehicles per day;
- 2nd Street, where daily traffic volumes range from approximately 2,000 to 2,400 vehicles per day;
- Mahon Avenue, where daily traffic volumes range from approximately 1,100 to 1,800 vehicles per day.
- 12th Street, where daily traffic volumes range from approximately 1,100 to 1,700 vehicles per day; and
- 4th Street between Chesterfield Avenue and Lonsdale Avenue, where daily traffic are approximately 1,300 vehicles per day.

Detailed traffic volume data is presented in Appendix B.

5.3 Pedestrian Safety

A number of locations were identified by residents and stakeholders where pedestrian safety is an issue, including:

- Several intersections along Chesterfield Avenue including intersections at 2nd Street, 5th Street and 6th Street, where residents reported difficulty crossing due to motorists who do not yield to pedestrians;
- 2nd Street at Forbes Avenue and mid-block on 2nd Street at Semisch Park;
- 3rd Street at Mahon Avenue, where residents indicated that motorists frequently do not yield to pedestrians at the marked crosswalk;
- 4th Street at Mahon where visibility issues create difficulties crossing the street; and
- 6th Street at Mahon Avenue.

5.4 Other Traffic and Safety Issues

In addition to short-cutting, speeding and pedestrian safety issues, residents also reported a number of other traffic and safety issues in the neighbourhood. These include:

- Limited visibility due to parked vehicles when entering a street from side streets and laneways, particularly on Chesterfield Avenue at most intersections with roads and lanes and at the intersection of 12th Street and 8th Street;
- A lack of compliance with stop signs at several four-way stops;
- Intersection safety at several locations due to change in road geometry;
- Intersection safety due to vehicles short-cutting the corner; and
- Limited visibility due to the existing boulevard on 1st Street.

Residents also identified a number of issues in the neighbourhood that are beyond the scope of the neighbourhood Traffic Calming Plan. These issues include poor illumination levels on many streets, poor visibility on several streets due to topography and vegetation encroaching onto the sidewalk, a lack of sidewalks or narrow sidewalks on some streets, parking enforcement, road maintenance, and noise infractions, particularly due to trucks using neighbourhood streets (particularly Chesterfield Avenue). Although these issues cannot be addressed through the Traffic Calming Plan, comments regarding these issues have been forwarded to the appropriate departments within the City.

6.0 THE TRAFFIC CALMING PLAN

A proposed Traffic Calming Plan was developed by the consulting team, with the involvement of neighbourhood residents, stakeholders and with the assistance of City staff. The plan was developed based on input received by the NTRA as well as comments from the Neighbourhood Walkabout, first Open House and e-mails, phone calls and letter received from residents. The proposed Traffic Calming Plan was presented to the NTRA for comments before being circulated in the Community Questionnaire and at the Second Open House.

As noted previously, a community questionnaire was distributed to every household and business in the neighbourhood, describing the proposed Traffic Calming Plan. Residents and business owners were asked to indicate whether they supported the plan, felt neutral, or did not support the plan. They were also asked to indicate their support for localized parking restrictions at intersections to improve safety, and to indicate their support for traffic circles and driver feedback signs in the neighbourhood. Approximately 6,100 questionnaires were distributed to the community and 297 completed questionnaires were returned by neighbourhood residents. This represents an overall response rate of approximately 5%, which is slightly lower than the response rate in other neighbourhoods, but represents the largest absolute number of responses in any Traffic Calming Plan to date. It is anticipated that the lower response rate could be attributed to the amount of multi-family housing in the neighbourhood. It should be noted that 28 surveys were received from residents living outside the neighbourhood, and were not included in the tabulated survey results. A copy of the community questionnaire is included in Appendix C, and a summary of the responses is provided below in Section 7.1.

The recommended Traffic Calming Plan for the Lower Lonsdale West neighbourhood consists of a mix of speed humps, traffic circles, curb extensions, driver feedback signs, crosswalks with flashing lights, and other features and is described in detail in Section 7.2. The Traffic Calming Plan is intended to address identified traffic and safety problems, and achieve the community's goals of improving safety and livability.

6.1 Community Support

As noted in Figure 9 and Table 1 provide a summary of the level of support in the neighbourhood for the Traffic Calming Plan. Overall, approximately 79% of respondents to the community questionnaire indicated that they support the plan. Thirteen percent indicated that they did not support the plan, and 8% indicated that they were neutral. Detailed questionnaire results are included in the appendices.

Seventy-nine percent is a strong indication of community support for the Traffic Calming Plan. This result exceeds the desired minimum two-thirds support indicated in the City's *Traffic Calming Program*. Compared with other neighbourhoods in the City for which traffic calming plans have been developed, the 79% support in Lower Lonsdale West is relatively high, as compared with 62% in Cloverley, 77% in Central Lonsdale East, 77% in Central Lonsdale West, 80% in Ridgeway, and 84% in Marine-Hamilton (see Figure 10).

Figure 9 — Support for the Traffic Calming Plan

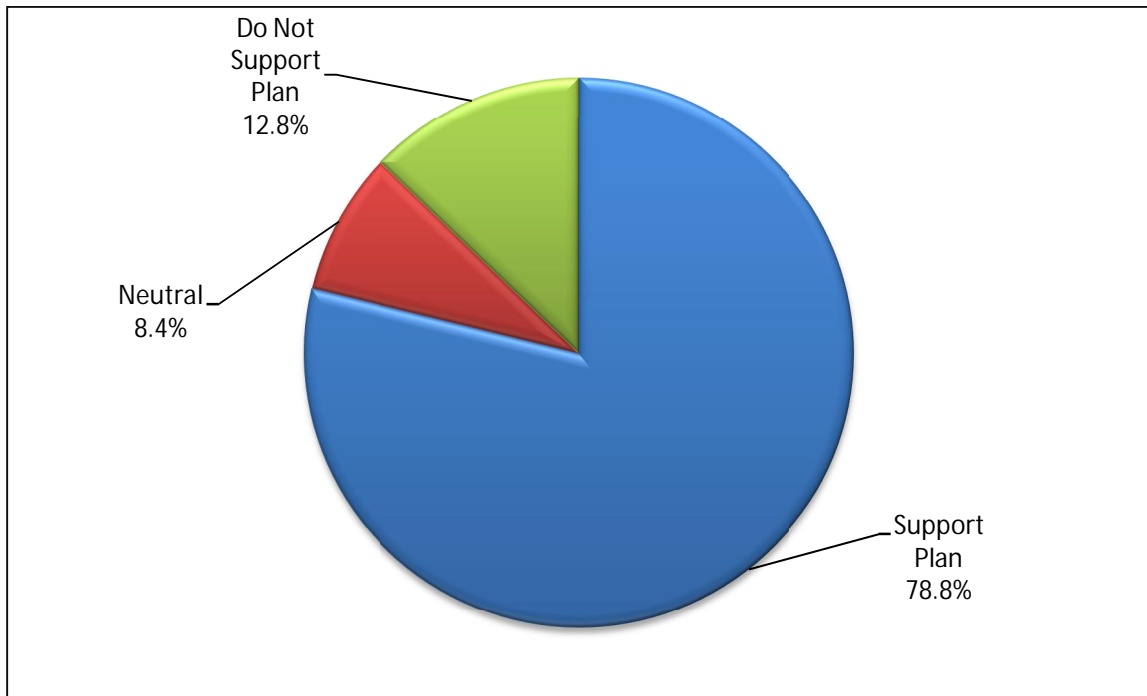
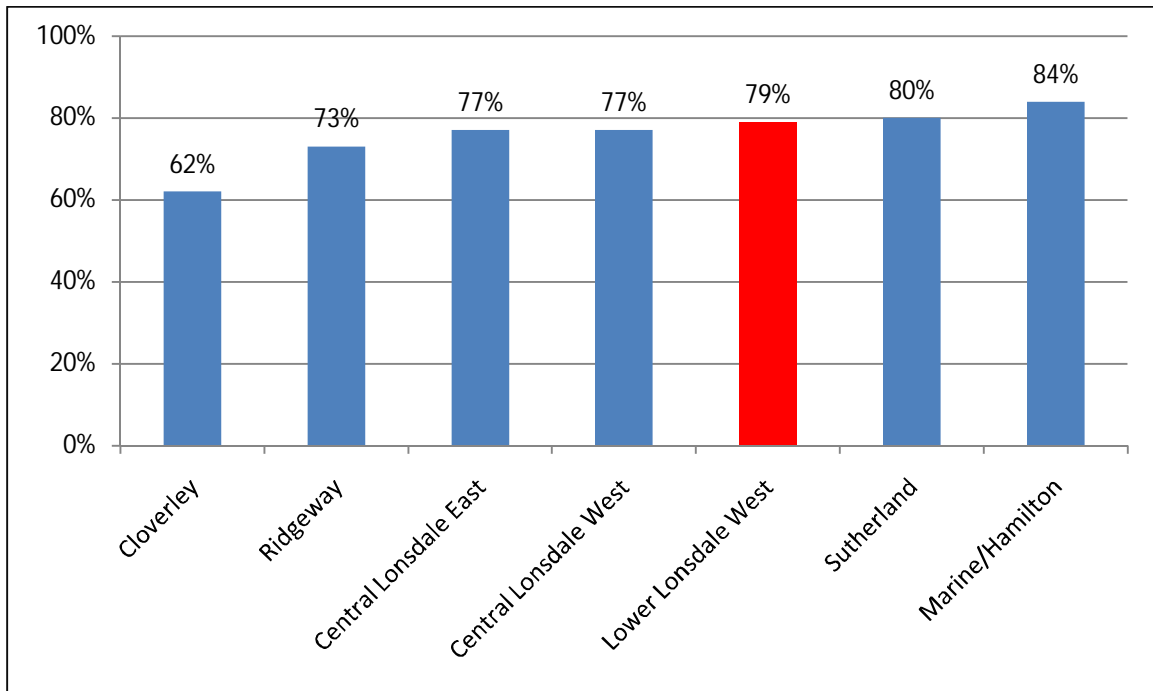


Table 1 — Support for the Traffic Calming Plan

	Responses	Percentages
I support the proposed plan	234	78.8%
I am neutral	25	8.4%
I do not support the plan	38	12.8%
Totals	297	100%

Figure 10 – Level of Support for Traffic Calming Plans



Within the Lower Lonsdale West neighbourhood, 38 respondents indicated that they do not support the plan, representing approximately 13% of the total 297 respondents who provided a response to this question and live in the Lower Lonsdale West neighbourhood. Table 2 provides a summary of reasons which residents gave for not supporting the plan (some respondents gave more than one reason for not supporting the plan). In general, the majority of reasons reflect opposition to the concept of traffic calming in general, and opposition to specific traffic calming measures.

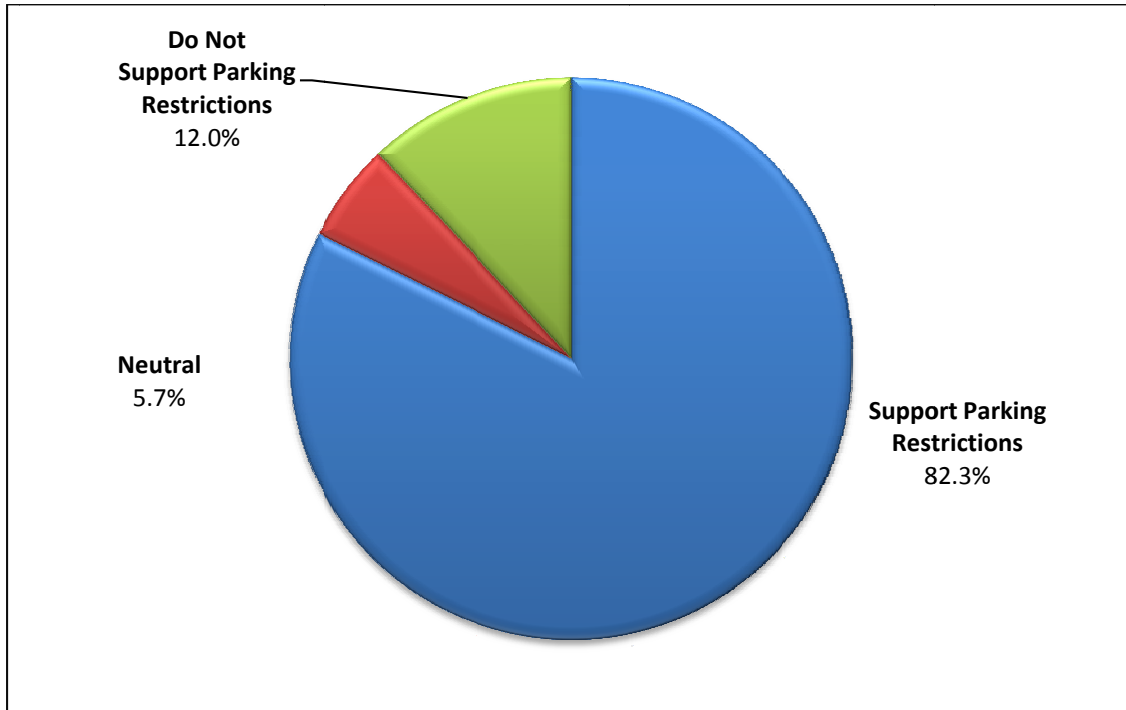
Table 2 — Reasons why residents did not support the Traffic Calming Plan

Reasons		Numbers of Responses
Traffic Circles	Don't like traffic circles in general	8
	Plants are unnecessary	2
Speed Humps	Don't like speed humps in general	5
	Don't like humps in specific locations	2
Raised Crosswalks	Don't like raised crosswalks in general	1
Curb Extensions	Don't like curb extensions in general	4
Other Concerns	Don't support driver feedback signs	1
	Already not enough parking in area	2
	Traffic will shift to other streets	1
	Don't like stop sign reorientation	2
General	Don't support traffic calming in general	6
	Don't think traffic calming plan is needed	3
	Traffic problems caused by density	1
	Need more enforcement	1
	Waste of tax dollars	5

Several respondents to the questionnaire also provided suggestions for changes to the Traffic Calming Plan. Many of the suggestions involved measures along arterial roads such as Chesterfield Avenue, Esplanade Avenue, Forbes Avenue, Keith Road, and Lonsdale Avenue which can not be addressed through the Traffic Calming Plan. Some respondents also suggested specific measures, such as additional speed humps or traffic circles, at specific locations throughout the study area. In particular, several comments were received about issues related to speeding, noise, and truck traffic along Chesterfield Avenue. In response to these comments, the recommended Traffic Calming Plan includes curb extensions and marked crosswalks at 5th Street. In addition, since Chesterfield is not a designated truck route, City staff have forwarded this concern to the RCMP for enforcement. Also, as part of the planning of bicycle facilities along 4th Street, intersection treatments may be incorporated at the intersection of 4th Street and Chesterfield Avenue to facilitate cyclists crossing of Chesterfield Avenue and which may also have traffic calming benefits. In addition, pedestrian safety issues at Forbes Avenue and Esplanade Street will also be addressed through the Forbes Avenue Bicycle Facilities Study..

Residents were also asked to indicate whether or not they support parking restrictions within one to two car lengths of corners at certain intersections where parked vehicles obstruct sight lines. Eighty-two percent of respondents indicated support for parking restrictions, and only 12% indicated that they do not support such restrictions.

Figure 11 – Support for Localized Parking Restrictions



The preliminary Traffic Calming Plan identified two optional traffic circles in the Lower Lonsdale West neighbourhood, at 2nd Street and Mahon Avenue and at 4th Street and Mahon Avenue, respectively. Respondents were asked to indicate whether they supported traffic circles at one of these locations, at both of these locations, at neither of these locations, or whether they were neutral to traffic circles. Responses to this question are summarized in Table 3. Figure 12 identifies the level of support for a traffic circle at 2nd Street and Mahon Avenue, and Figure 13 identifies the level of support for a traffic circle at 4th Street and Mahon Avenue. There is slightly stronger support for a traffic circle at 2nd Street and Mahon, with approximately 67% support, than there is for a traffic circle at 4th Street and Mahon, with approximately 66% support. The traffic data indicated that traffic volumes are significantly higher on 2nd Street (approximately 2,000 vehicles per day) than 4th Street (less than 1,000 vehicles per day). Based on this data, feedback the questionnaire, and limited financial resources to implement traffic circles at both locations, the recommended Traffic Calming Plan includes one traffic circle at 2nd Street and Mahon Avenue. Further investigation and funding for a traffic circle at 4th Street and Mahon Avenue will be possible in connection with the 4th Street Bikeway project.

Table 3 — Response to Options for Traffic Circle

	Responses	Percentages
Support at 2 nd St. and Mahon Ave.	12	4.0%
Support at 4 th St. and Mahon Ave.	9	3.0%
Support at both locations	189	63.4%
Neutral	36	12.1%
Do not support	52	17.4%
Totals	298	100%

Figure 12 – Support for Traffic Circle at 2nd Street and Mahon Avenue

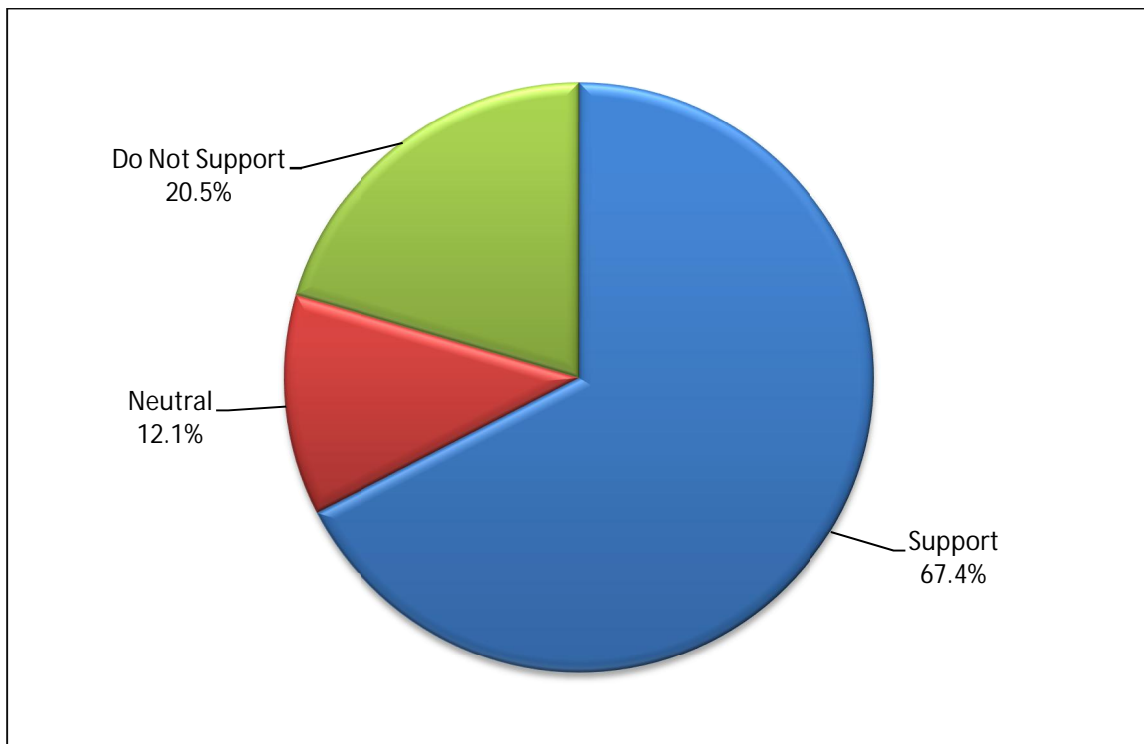
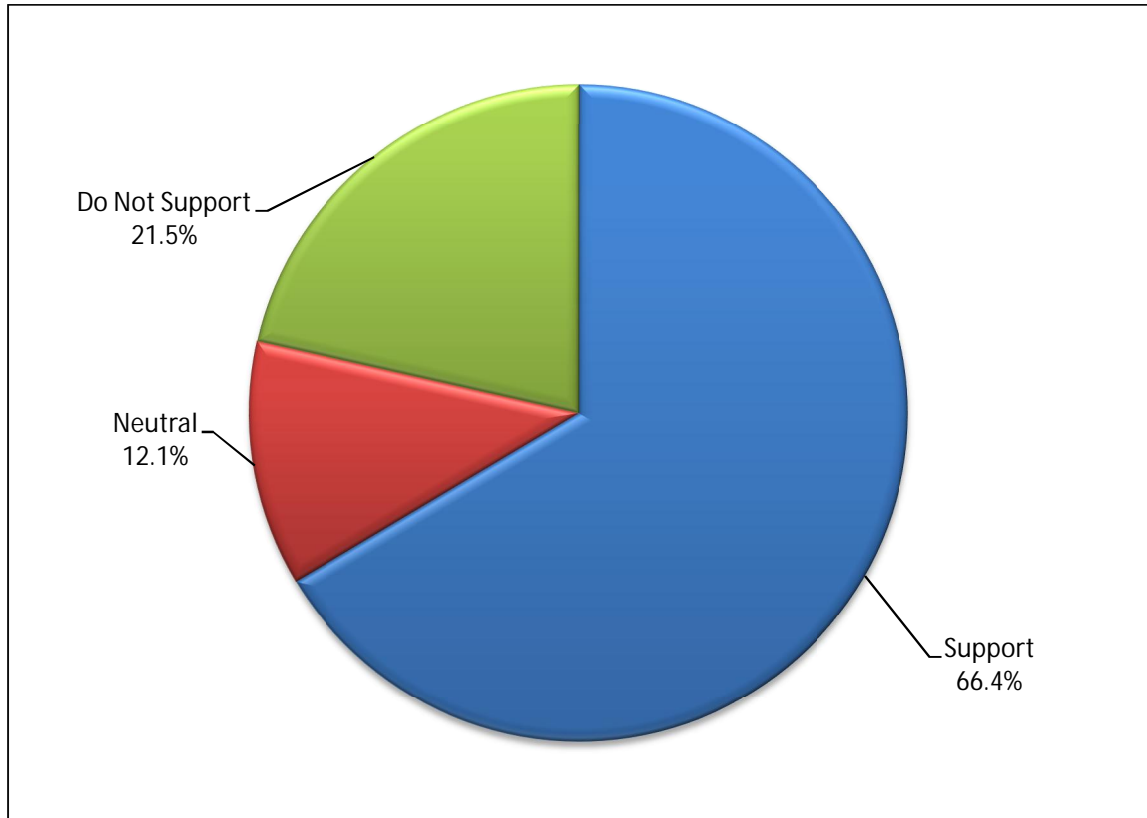


Figure 13 – Support for Traffic Circle at 4th Street and Mahon Avenue

The preliminary Traffic Calming Plan identified two driver feedback signs on West 13th Street adjacent to Queen Mary Elementary School to address concerns regarding speeding in a 30 km/h zone on an arterial road. Respondents were asked to indicate whether they supported driver feedback signs. Responses to this question are summarized in Table 4. In addition, several respondents suggested driver feedback signs at additional locations throughout the neighbourhood. Based on this feedback, the recommended Traffic Calming Plan indicates that one additional driver feedback sign will be investigated in the southbound direction of Forbes Avenue in conjunction with the Forbes Avenue Bicycle Facilities Study.

Table 4 — Support for Driver Feedback Sign

	Responses	Percentages
Support	201	67.9%
Neutral	49	16.6%
Do not support	46	15.5%
Totals	296	100%

6.2 Features of the Recommended Traffic Calming Plan

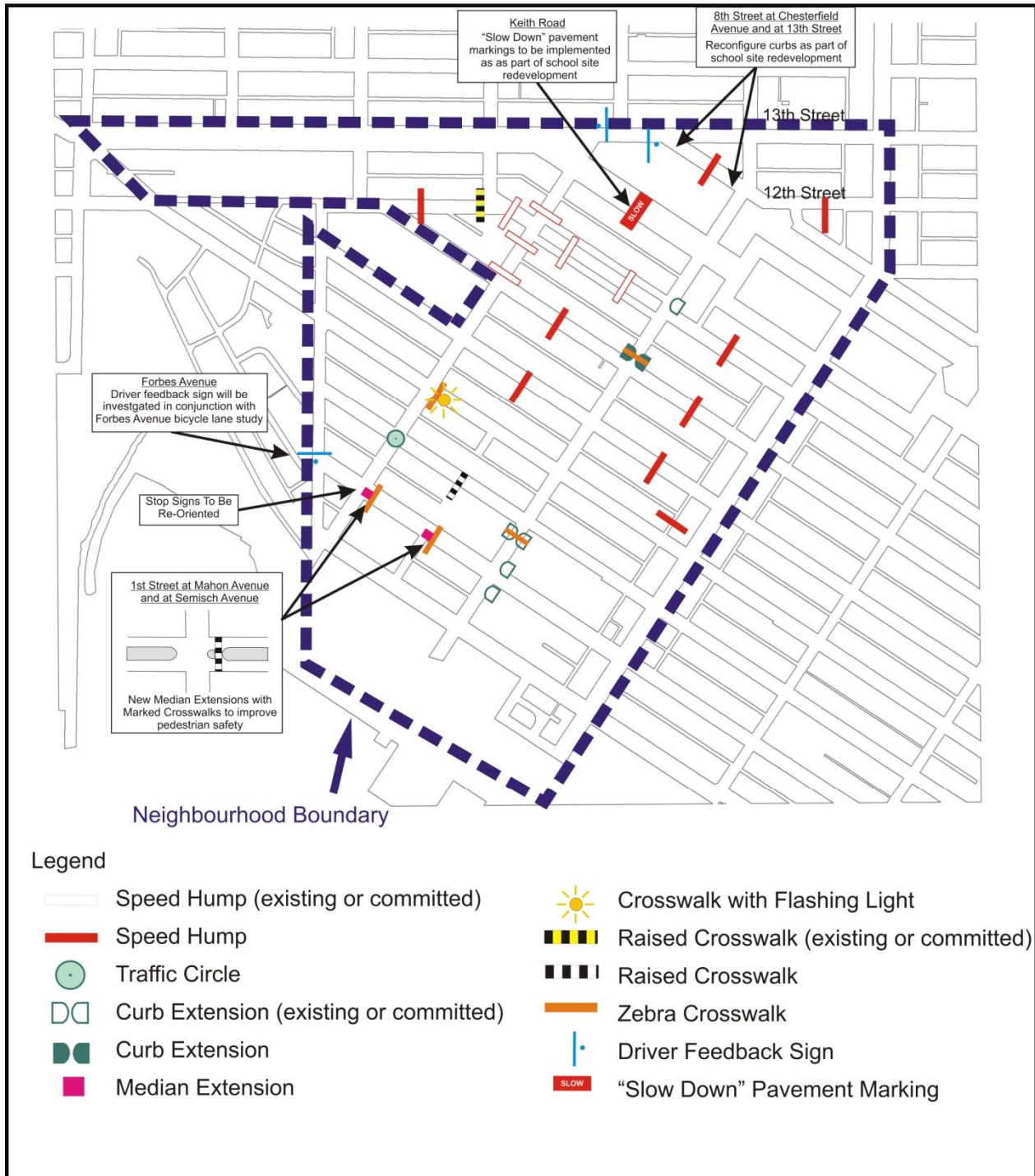
The recommended Traffic Calming Plan for the Lower Lonsdale West neighbourhood is illustrated in Figure 14. Specific features of the Traffic Calming Plan are described below.

- Speed humps are proposed on several neighbourhood streets. Speed humps are effective in preventing speeding, and also improve safety. At moderate vehicle speeds, speed humps gently rock a car, whereas at higher speeds, there is more of a jolt. The result is that motorists typically slow to about 30 to 35 km/h traveling over speed humps. Speed humps do not affect parking — motorists can park on top of a speed hump. Speed humps do not typically increase traffic noise, and are safe for bicycles. Speed humps are not the same as the speed “bumps” used in shopping mall parking lots or residential lanes. Speed humps are 4 metres (13 feet) long.

Speed humps are proposed on 4th, 5th, 6th, 8th and 12th Streets to address speeding problems and discourage shortcutting along these streets. Speed humps are also proposed in the lane west of Lonsdale Avenue between 3rd and 4th Street to reduce short-cutting.

A typical speed hump is illustrated in Figure 15. A schematic drawing of a speed hump is provided in Figure 16. A local example of speed humps is on Ridgeway Avenue between 16th and 22nd Streets

Figure 14 – Recommended Traffic Calming Plan

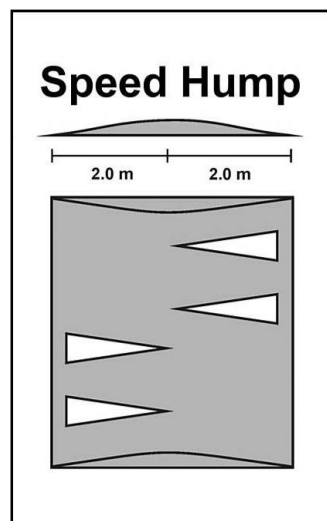


Some residents indicated that they would like to see speed bumps installed in lanes behind their homes, to address speeding and short-cutting concerns. Speed bumps have been installed in some lanes in the Lower Lonsdale West neighbourhood. Residents who wish to have speed bumps installed in their lanes can do so through the Local Improvement Program, whereby residents contribute a portion of the cost of speed bumps.

Figure 15 — Speed Hump



Figure 16 — Speed Hump Schematic



- Raised crosswalks combine speed humps with a marked crosswalk, as shown in Figure 17. This slows motorists at the crosswalk, and enhances pedestrian safety.

Raised crosswalks can be used to discourage speeding and shortcutting. A raised crosswalk is recommended 2nd Street between Semisch Park. In addition, a raised crosswalk has already been committed to be provided on 6th Street at Jones Avenue.

Figure 17 – Raised Crosswalk



- Traffic circles are raised landscaped islands placed in the centre of an intersection to safely control traffic without using stop signs or traffic signals. A typical traffic circle is illustrated in Figure 18. Navigating a traffic circle requires that motorists slow down and drive around the circle in a counter-clockwise direction. The design of a traffic circle accommodates large vehicles, which can drive onto the concrete apron around the circle. Traffic circles improve safety for pedestrians and other road users, and have been shown to reduce collisions by up to 80%. Traffic circles also discourage speeding.

Traffic circles work best at intersections of local streets. One traffic circle is proposed on Mahon Avenue at 2nd Street to improve intersection safety, discourage speeding on east-west streets, and discourage shortcutting through the neighbourhood. Local examples of traffic circles are on St. Andrews, Ridgeway and Moody south of 13th Street.

Figure 18 — Traffic Circle



- Curb extensions involve extending the curb on one or both sides of the roadway, narrowing the width of the road between the curb extensions, as illustrated in Figure 19. Curb extensions improve pedestrian safety by increasing the visibility of pedestrians and reducing the crossing distance. Curb extensions also improve safety by improving sight lines for motorists turning to and from a side street, and by discouraging high-speed turns. Existing curb extensions are located at several intersections along Chesterfield Avenue. New curb extensions are proposed on Chesterfield Avenue at 5th Street.

Figure 19 — Curb Extension



- Driver feedback signs incorporate a radar speed detector and an illuminated display to provide immediate feedback to approaching motorists, advising them of their speed relative to the posted speed limit. The signs can be programmed to display speeds up to a maximum limit (such as 70 km/h), which means that if a motorist is traveling at 75 km/h, for example, the sign would only display a speed of 70 km/h. This would still alert the motorist to the fact that he or she is speeding, but would avoid concerns that some motorists might use the driver feedback signs to see how high a speed they could reach. Driver feedback signs are similar to those used by Speed Watch patrols, with the key difference being that driver feedback signs are installed permanently, and function 24 hours a day, seven days a week. Experience in the U.S. and the U.K. indicates that driver feedback signs are effective in discouraging speeding.

Driver feedback signs are proposed on 13th Street adjacent to Queen Mary Elementary School. An additional driver feedback sign is proposed to be investigated in the southbound direction of Forbes Avenue in conjunction with the Forbes Avenue Bicycle Facilities Study. An example driver feedback sign is illustrated in Figure 20.

Figure 20 — Driver Feedback Sign



- Special Crosswalks (crosswalks with flashing yellow lights) would be implemented on 3rd Street at Mahon Avenue to improve pedestrian safety. Flashing lights are located at the side of the road or overhead, and are activated by pushbuttons at curbside, as shown in Figure 21. The flashing lights alert motorists that a pedestrian is in the crosswalk, and that they should slow or stop.

Figure 21 – Crosswalk with Flashing Lights



- Marked “zebra” crosswalks with curb extensions are proposed on Chesterfield Avenue at 5th Street. Marked “zebra” crosswalks with curb extensions are also proposed on 3rd Street at Mahon Avenue in conjunction with a special crosswalk (flashing yellow lights) to improve pedestrian safety. A marked crosswalk is also proposed on Chesterfield Avenue at 2nd Street, to connect the existing curb extensions.
- Median extension. New median extensions with marked “zebra” crosswalks are proposed in the centre of 1st Street at the intersections with Mahon Avenue and Semisch Avenue to improve pedestrian safety.
- Stop signs at the intersection at 1st Street and Mahon Avenue would be re-oriented to face east and west. This would improve safety for pedestrians crossing 1st Street at this intersection and for cyclists.

Parking Restrictions at Intersections

Many residents expressed concerns regarding obstructed sight lines at intersections due to vehicles parked close to the intersection. Pedestrians crossing these streets can be blocked from motorists' view by parked vehicles, and motorists turning onto these streets from side streets and lanes can find it difficult to see approaching traffic due to parked vehicles.

To address this issue — and in addition to the features of the Traffic Calming Plan described above — the City will work towards implementing parking restrictions at problem locations. These restrictions would prohibit motorists from parking within one to two car lengths of the corner, so as to improve sight lines, and would be indicated with “No Parking” signs. Implementation of parking restrictions is supported by 83% of respondents to the community questionnaire, and would occur independently of implementation of the Traffic Calming Plan.

Emergency Vehicles

Emergency vehicles — particularly fire trucks — can be affected by some traffic calming measures. Research has shown that speed humps and speed tables can add 3 to 10 seconds delay per device, and traffic circles can add a few seconds delay as well. In community studies conducted throughout North America, most residents consider this an acceptable trade-off given the benefits that traffic calming can provide on a daily basis. For some residents, this could mean up to 30 seconds additional time for emergency response. Most residents, however, consider this an acceptable trade-off given the benefits that traffic calming measures provide on a daily basis.

7.0 IMPLEMENTATION

In this section, a strategy is presented for implementing the recommended Lower Lonsdale West Neighbourhood Traffic Calming Plan.

7.1 Costs

As summarized in Table 5, the cost of implementing the recommended Lower Lonsdale West Neighbourhood Traffic Calming Plan is estimated to be approximately \$155,000. This includes the costs of the majority of the traffic calming measures described in the previous section. It should be noted that some of the traffic calming measures described in the previous section have not been included in the cost estimates in Table 5, including: the driver feedback sign on Forbes Avenue, improvements to the Forbes Avenue and Esplanade Street pedestrian crossing, and the "Slow Down" pavement markings on Keith Road. These measures are not included in the Traffic Calming Plan as implementation items, but have been included to be added at a later date subject to future funding and other development opportunities. It should be noted that the estimated costs in Table 5 do not include any allowance for additional traffic calming measures which might be added to the plan through follow-up monitoring.

Table 5 — Estimated Costs for Traffic Calming Plan

Measure	Unit Cost	Quantity	Total Cost
Speed hump	\$3,000	8	\$24,000
Speed hump in lane	\$1,000	1	\$1,000
Raised crosswalk	\$6,000	1	\$6,000
Traffic circle	\$14,000	1	\$14,000
Curb extension	\$5,000	2	\$10,000
Driver feedback sign	\$11,000	2	\$22,000
Special crosswalk	\$55,000	1	\$55,000
Median extension	\$2,000	2	\$4,000
Signage, pavement markings and miscellaneous			\$5,000
Total			\$141,000
Contingency (10%)			\$14,000
Grand Total			\$155,000

The estimated costs in Table 5 are based on recent costs for similar measures implemented in other neighbourhoods in the City, and are intended as order-of-magnitude estimates for budgeting purposes. City staff have provided these costs, and will prepare more accurate

estimates at the time when detailed designs are prepared. The costs of implementing the plan have been incorporated into the City's capital planning process, and other funding opportunities will also be pursued, such as ICBC's Road Improvement Program partnership.

7.2 Timing

If approved by Council in 2009, the Traffic Calming Plan would be implemented in 2010. The City has budgeted funds for implementation of the plan within the 10-Year Capital Plan.

Some traffic calming measures might be implemented on a temporary basis to provide an opportunity to assess their effectiveness and fine-tune the geometrics. Measures which might be implemented temporarily include traffic circles. Figure 22 provides an example of a temporary traffic circle implemented in the Ridgeway neighbourhood (this is the same location as the traffic circle in Figure 18).

Figure 22 — Temporary Traffic Circle



Implementation of the Traffic Calming Plan would begin in 2010 with the construction of speed humps, speed tables and raised crosswalks, as well as appropriate signage and pavement markings. Some or all curb extensions and traffic circles could be constructed on a temporary, with permanent construction to occur in 2010, following evaluation.

7.3 On-Going Monitoring

It is important to note that the Traffic Calming Plan is not “cast in stone.” Although analysis of traffic conditions in the Lower Lonsdale West neighbourhood — as well as experience in other neighbourhoods and communities — indicates that the plan will be effective in resolving traffic problems, every neighbourhood is different. The Traffic Calming Plan may need to be fine-tuned based on actual experience, to ensure that existing problems are adequately addressed. As well, new issues might arise as a result of changes in the neighbourhood and elsewhere on the North Shore.

To ensure that the Traffic Calming Plan is effective and that traffic and safety issues are addressed, City staff will monitor conditions following implementation of the plan. This will involve collecting traffic volume and speed data after the plan is implemented, in the same locations as data were collected during development of the plan. These data and input from the permanent Neighbourhood Transportation Committee will indicate whether there are any outstanding traffic and safety problems. Where problems persist or new problems are identified, staff can work with the Neighbourhood Transportation Committee to modify the plan as necessary.

APPENDIX A

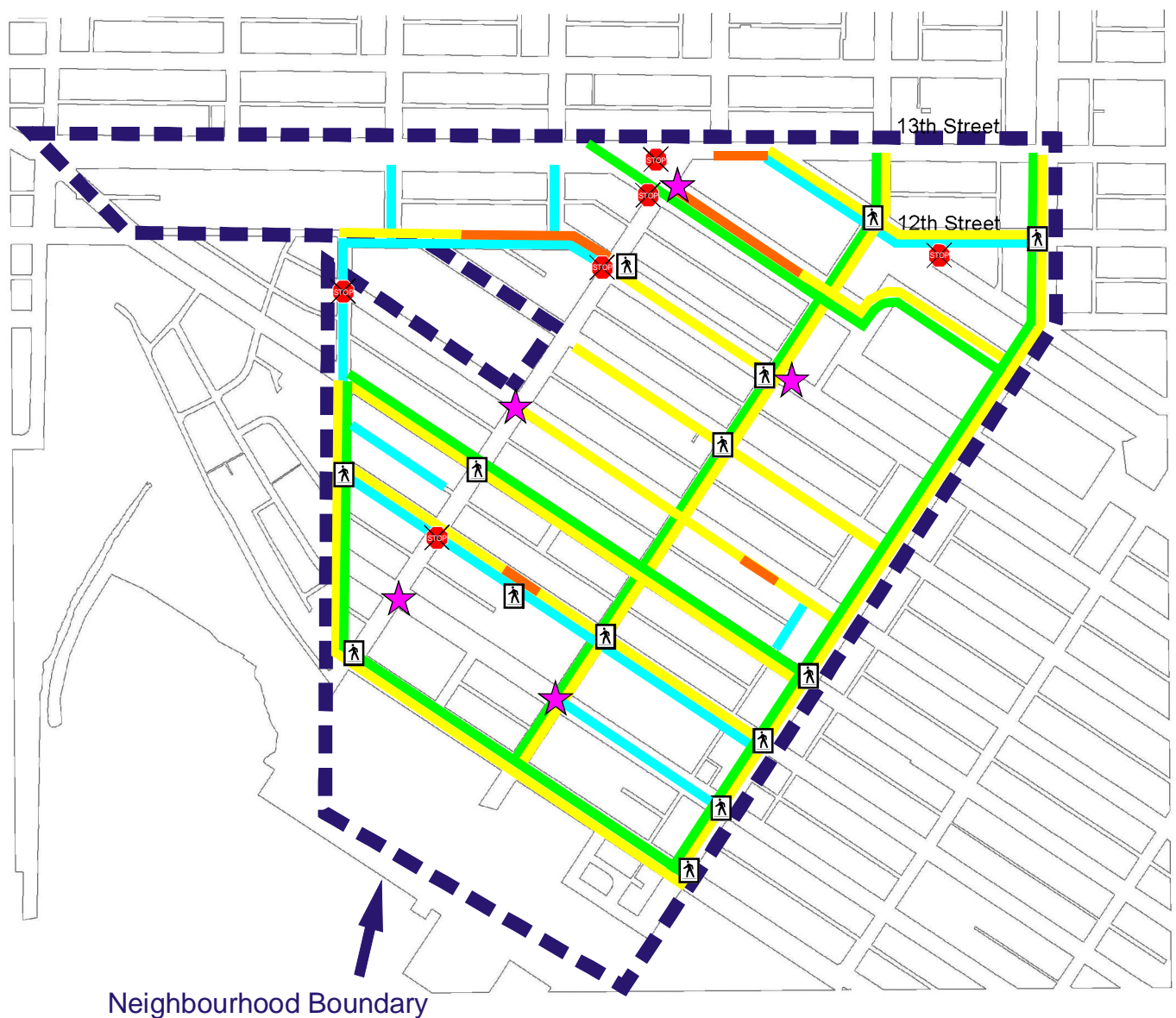
Issues

Identified Issues

Legend

The following types of traffic concerns have been identified by the Neighbourhood Traffic Residents Association, the first two Open Houses, the Community Questionnaire, and stakeholder comments.

-  Speeding
-  Speeding in a 30km/h Zone
-  Short-cutting
-  Traffic Volumes
-  Intersection Safety (Visibility, etc)
-  Stop Sign Non-Compliance
-  Pedestrian Safety



Identified Neighbourhood Traffic Issues

The following types of traffic concerns have been identified in your neighbourhood. These concerns were identified by the Neighbourhood Traffic Residents Association and by residents during the Neighbourhood Walkabout, the first two Open Houses, the Community Questionnaire, and stakeholder comments.

Issue	Location	Notes	
TRAFFIC			
Short-cutting	Forbes Avenue (between Keith Rd. & 6 th St.)		
	Forbes Avenue (between 3 rd St. & 6 th St.)		
	Jones Avenue (between Keith Rd & 6 th St.)		
	1 st Street (between Lonsdale Ave. & Chesterfield Ave.)		
	2 nd Street (between Forbes Ave. & Lonsdale Ave.)		
	6 th Street (west of Mahon Ave.)		
	8 th Street (between 13 th St. & Chesterfield Ave.)		
	12 th Street (between Lonsdale Ave. & Chesterfield Ave.)		
Lane between Forbes Ave. and Mahon Ave. north of 2 nd St.			
Lane between 3 rd and 4 th Street west of Lonsdale Ave.	To avoid no left turn at 3 rd and Lonsdale		
Speeding	Chesterfield Avenue	Particularly between 3 rd and Keith	
	Esplanade Street		
	Forbes Avenue	Particularly in the evenings and overnight	
	Forbes Avenue (between 3 rd Street & 4 th Street)		
	Keith Road		
	Lonsdale Avenue	Particularly between Keith Rd and 3 rd St.	
	2 nd Street	Particularly in the evenings and overnight	
	3 rd Street		
	4 th Street (between Lonsdale Ave. & Mahon Ave.)	Wide road	
	5 th Street (between Lonsdale Ave. & Mahon Ave.)	Wide road	
6 th Street (between Chesterfield Ave. & Mahon Ave.)	Existing speed humps not effective in slowing traffic		
6 th Street (west of Jones Ave.)	30 kph zone; wide road		
12 th Street (between Lonsdale Ave. & Chesterfield Ave.)			
13 th Street (between Jones Ave. & Chesterfield Ave.)	30 kph zone		
Traffic Volumes	Chesterfield Avenue		
	Keith Road (between Chesterfield Ave. & Mahon Ave.)	Speed humps along 6 th have encouraged more traffic along Keith Rd.	
	Keith Road (north of Victoria Park)	Westbound traffic	
	Esplanade Avenue		
	Keith Road (between Lonsdale Ave. & Chesterfield Ave.)	Higher traffic volumes WB	
Lonsdale Avenue			
3 rd Street			
PEDESTRIAN SAFETY			
Pedestrian Safety	Chesterfield Avenue @ 2 nd Street	Difficult to cross for pedestrians	
	Chesterfield Avenue @ 6 th Street	Curb letdowns but no crosswalk	
	Esplanade Street @ Mahon Avenue	High traffic speeds and road alignment	
	Lonsdale Avenue (between Esplanade St. & 3 rd St)	Wide crossing distances	
	Lonsdale Avenue @ 12 th Street.	Crosswalk non-compliance	
	Mahon Avenue @ 4 th Street	Visibility issues	
	2 nd Street @ Forbes		
	2 nd Street @ Semisch Park	Mid-block crossing between park	
3 rd Street @ Mahon Avenue	Vehicles do not comply with crosswalk. Also crosswalk is west side of Mahon Ave but bus stop is on east side.		
5 th Street @ Chesterfield Avenue	Difficult to cross for pedestrians		
6 th Street @ Mahon Avenue	Stop sign needed to slow traffic going down Mahon, and to help pedestrians cross Mahon.		
TRAFFIC SAFETY			
Stop Sign Non-Compliance	Keith Road @ Mahon Avenue		
	Mahon Avenue @ 13 th Street		
	2 nd Street @ Mahon Avenue		
	4 th Street @ Forbes Avenue		
	4 th Street @ Mahon Avenue		
	6 th Street @ Mahon Ave.		
8 th Street @ 12 th Street			
Intersection Safety	Keith Road @ Mahon Avenue	Confusing to motorists	
	Mahon Avenue @ 1 st Street		
Other Safety Issues	1 st Street @ Chesterfield Avenue		
	6 th Street @ Chesterfield Avenue	Change in road alignment	
	12 th Street (between Chesterfield Ave. & 8 th St)	Short-cutting corner	
1 st Street @ Mahon Ave	Boulevard presents visibility issues		
ISSUES BEYOND THE SCOPE OF TRAFFIC CALMING PLAN (These issues will be addressed separately from the Traffic Calming Plan)			
Issue	Location	Notes	Issued to be addressed by:
Parking	4th St, 5th St, and 6th St.	People are leaving their cars then taking the SeaBus	Bylaw Enforcement
	Various locations	Vehicles parking too close to intersections	Bylaw Enforcement
Visibility	2 nd Street	Vehicles parking adjacent to park	Bylaw Enforcement
	Chesterfield Avenue @ Keith Road	Vegetation in roundabout and Victoria Park	Engineering Department
	Chesterfield @ 2 nd Mahon Ave. north of 2 nd	Vegetation obstructs sightlines	Engineering Department
Sidewalks	12 th Street @ 8 th Street		
	13 th Street	Narrow sidewalks	Engineering Department
Illumination	2 nd Street (between Mahon Ave. and Chesterfield Ave.)	No illumination of poor levels of illumination on some streets	Engineering Department
	6 th Street (between Mahon Ave. and 5 th St West)		
Maintenance	12 th Street		
	Esplanade Street at Forbes Avenue	Crosswalk not adequately painted	Engineering Department
Noise	5 th Street at Lonsdale		
	2 nd Street (west of Chesterfield)	Lack of maintenance/street cleaning	Engineering Department
Trucks	Various locations		Engineering Department
	Chesterfield Avenue	Northbound	Engineering Department



APPENDIX B
Data

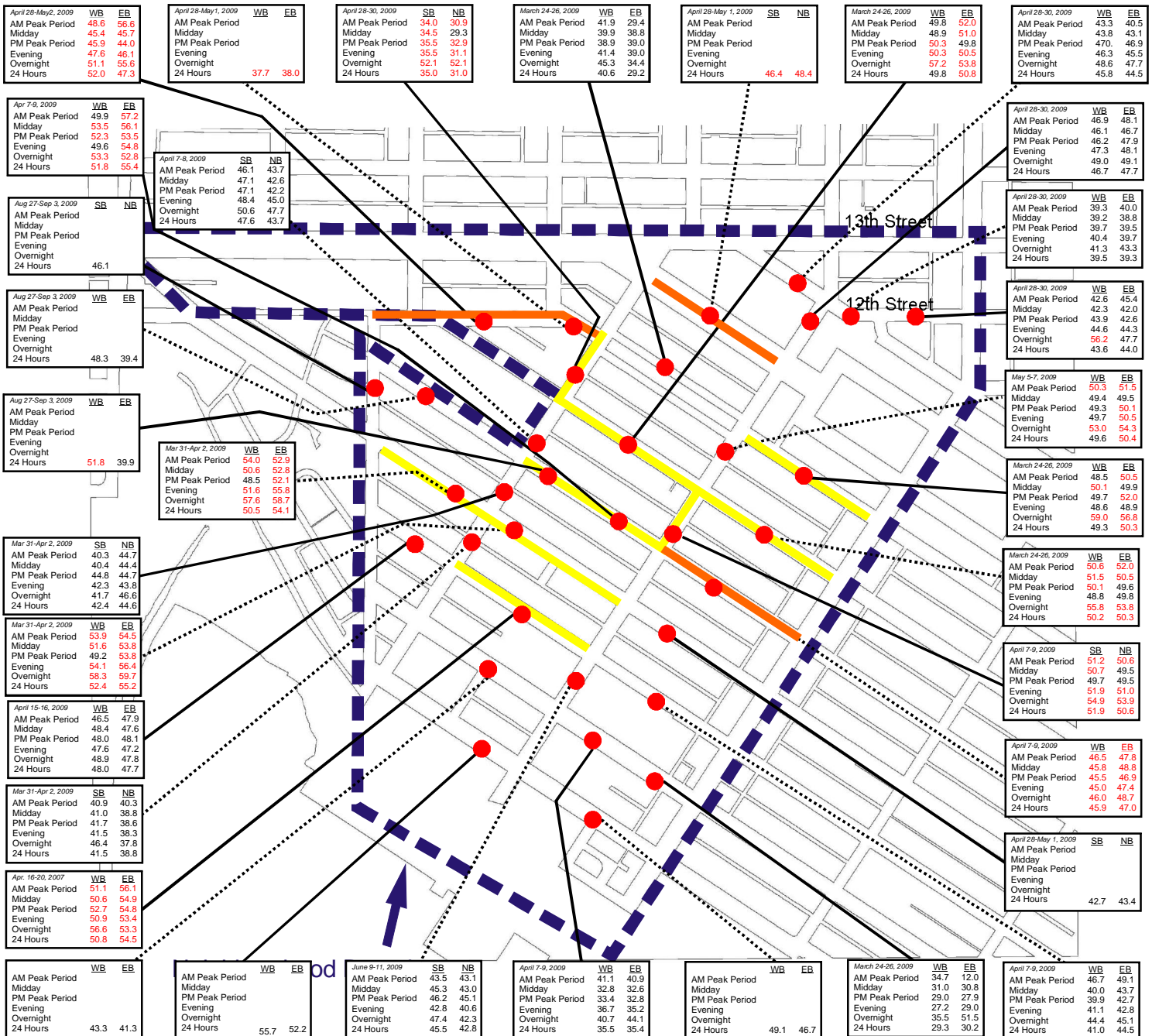
Vehicle Speeds

Legend

- Count Location
- 24-Hour 85th percentile speeds >10% higher than speed limit
- 24-Hour 85th percentile speeds 1-10% higher than speed limit

All speeds are km/h and represent 85th percentile speeds, which reflects the speed below which 85% of vehicles are traveling

- AM Peak Period: 6:00 am - 9:00 am
- Midday: 9:00 am - 3:00 pm
- PM Peak Period: 3:00 pm - 6:00 pm
- Evening: 6:00 pm - 11:00 pm
- Overnight: 11:00 pm - 6:00 am



Traffic Volumes

Legend

● Count Location

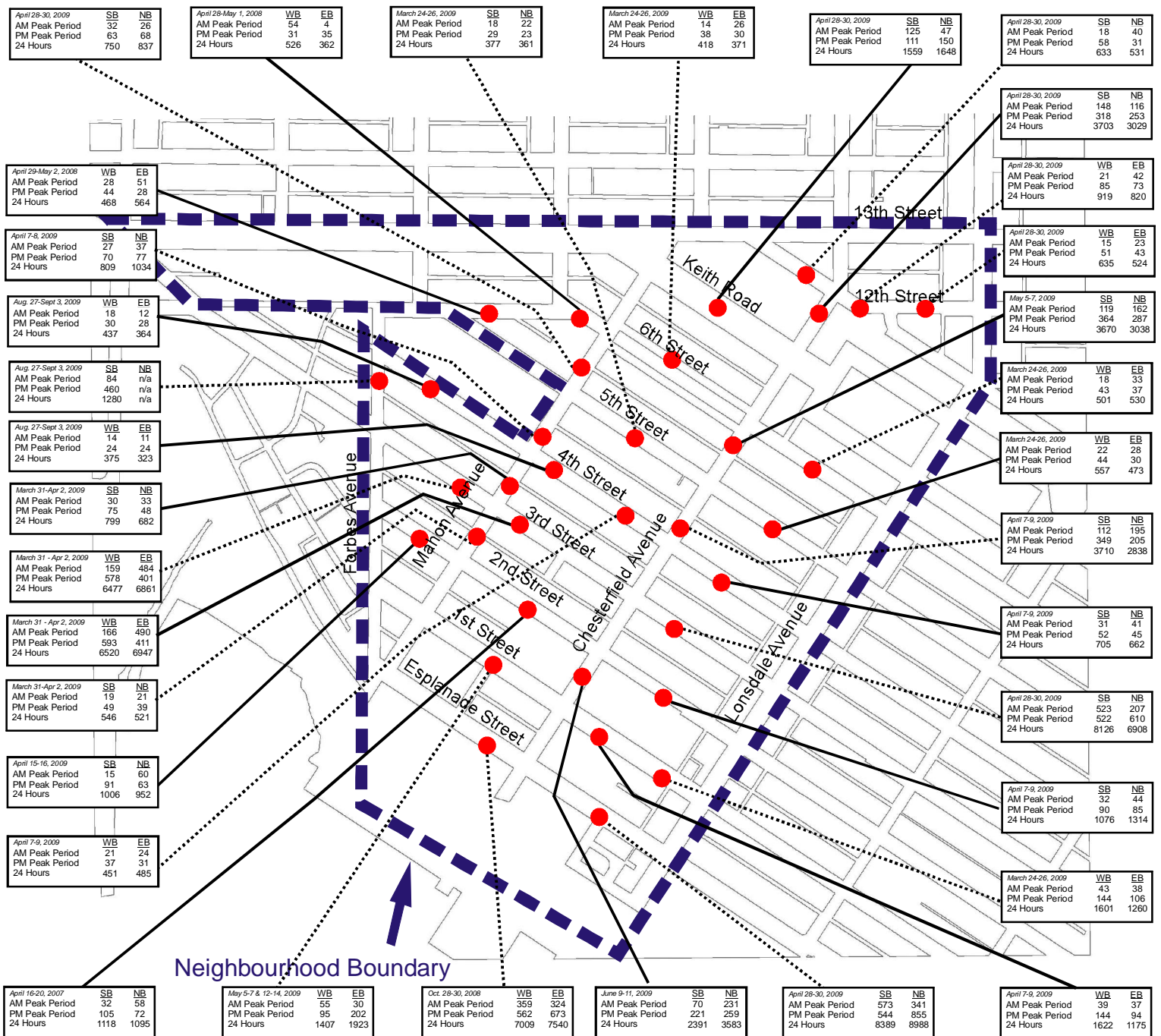
Peak Hours are typically between 7:00 - 8:00 am and 4:00 - 5:00 p.m.

NB = Northbound

SB = Southbound

EB = Eastbound

WB = Westbound



Collision Data

Legend

Intersection Mid Block Average Annual Number of Collisions



1 to 3



3 to 5



More than 5

Average number of annual collisions, based on the number of collisions reported to ICBC between 2003 and 2008.

Note: Intersections with an average of less than 1 collision per year not shown on map.



Neighbourhood Boundary



APPENDIX C
Community Involvement

Lower Lonsdale West TRAFFIC CALMING PLAN

Lower Lonsdale West neighbourhood residents are invited to participate in the development of a Traffic Calming Plan.

If you live in this area, your participation and input will be an important part of the decision-making process.

How To Get Involved

Development of the Lower Lonsdale West Traffic Calming Plan will begin this spring, with implementation planned for this fall.

You can participate by:

- Joining the Lower Lonsdale West Neighbourhood Traffic Residents' Association.
- Participating in upcoming community events. The first will be a neighbourhood walkabout one Sunday in early April. Detailed information about the time and route will be distributed in late March, as well as information about other community events.
- Checking the City's Traffic Calming webpage for updates and information about upcoming events:
<http://www.cnv.org/lowerlonsdalewest>

Neighbourhood Traffic Residents' Association

The Neighbourhood Traffic Residents' Association (NTRA) will include approximately eight residents from the Lower Lonsdale West neighbourhood. The NTRA will provide knowledge of local issues, help coordinate community events, and provide input into the development of a neighbourhood Traffic Calming Plan.

As a member of your Neighbourhood's Traffic Residents' Association, you must be able to:

- Represent the interests of the neighbourhood
- Commit to approximately six meetings between April and July 2009
- Participate in a three-hour neighbourhood walkabout
- Participate in community events (up to three)

If you are interested in being a member of the NTRA, you can obtain an application from www.cnv.org/lowerlonsdalewest or from the Engineering department at City Hall. Applications should be submitted by March 27.

More Information

A newsletter will be distributed in late March to every household in the Lower Lonsdale West neighbourhood, detailing community events including the date, time and route of the walkabout.

Lower Lonsdale West Traffic Calming Plan

Traffic Calming Goals:

- To make streets safe for everyone – pedestrians, cyclists, motorists and residents
- To preserve and enhance the liveability of the neighbourhood

Lower Lonsdale West Area Map:



For more information please contact:

Daniel Watson
Transportation Planner
City of North Vancouver
Engineering, Parks and
Environment
Tel: 604- 982-3905
Email: dwatson@cnv.org

Lower Lonsdale West TRAFFIC CALMING PLAN

Work has begun on a Traffic Calming Plan for your neighbourhood. The plan will address traffic issues on neighbourhood streets and examine ways to improve safety and accessibility for pedestrians, cyclists and transit users.

We invite you to join City of North Vancouver staff and consultants in a **Neighbourhood Walkabout on Sunday, April 19**. Plan to meet us anywhere along the route shown on the reverse side of this notice, to tell us about any traffic concerns you may have. We will be walking through the neighbourhood between **2:00pm and 5:00pm** to discuss and examine traffic issues with residents firsthand.

The Neighbourhood Walkabout is the first of several community events where you can participate in developing the Neighbourhood Traffic Calming Plan. The next event will be a **Traffic Calming Open House** – drop in anytime between **6:00pm and 8:30pm on Tuesday, April 28 at John Braithwaite Community Centre** (145 West 1st Street) to identify issues in your neighbourhood.

In May, we plan to distribute a newsletter and questionnaire describing a proposed Traffic Calming Plan for the neighbourhood, and asking for your comments. In conjunction with the questionnaire, we will hold another open house so that you can ask questions about the plan prior to returning your questionnaire. Afterwards, we will hold another open house to present the results of the questionnaire and to explain how the Traffic Calming Plan will be implemented.

The City of North Vancouver has established a **Neighbourhood Traffic Residents Association** comprised of neighbourhood residents who will work with City staff and consultants in preparing the plan.

If you cannot join us on the walkabout, be sure to take the time to let us know how you feel about traffic in your neighbourhood. Check the Traffic Calming website and submit your comments via e-mail or fax as indicated below. And plan to drop by the open house on **Tuesday, April 28 between 6:00pm and 8:30pm**.

Lower Lonsdale West Traffic Calming Website:
www.cnv.org/LowerLonsdaleWest

Submit your comments by e-mail to: eng@cnv.org
or by fax to: 604-985-8439.

Walkabout and Open House Notice

Upcoming Events:

- **Neighbourhood Walkabout**
Sunday April 19
2:00pm - 5:00pm
See map on reverse.
- **Open House**
Tuesday, April 28
6:00pm to 8:30pm
John Braithwaite
Community Centre

Lower Lonsdale West Area Map:



For more information please contact:

Daniel Watson
Transportation Planner
City of North Vancouver
Engineering, Parks and
Environment
Tel: 604-982-3905
Email: dwatson@cnv.org

WALKABOUT ROUTE

Sunday April 19

Join us along the route at any time between 2:00pm to 5:00pm, as we walk through your neighbourhood to discuss traffic and safety issues.

Walkabout and Open House Notice



Lower Lonsdale West TRAFFIC CALMING PLAN

April 28, 2009

Dear Resident:

The City of North Vancouver is preparing a Traffic Calming Plan for the Lower Lonsdale West neighbourhood. Work began earlier this month with a neighbourhood walkabout on April 19. At the walkabout, residents identified a range of concerns regarding traffic and safety in the neighbourhood. This questionnaire is your opportunity to tell us about any additional concerns that have not already been identified, as well as tell us what types of traffic calming solutions you would like to see in your neighbourhood.

City staff and the consultants developing the Traffic Calming Plan are being assisted by a Neighbourhood Transportation Residents Association (NTRA) comprised of neighbourhood residents. The NTRA and many other neighbourhood residents have already provided valuable input regarding traffic and transportation issues via e-mail, phone, fax and the neighbourhood walkabout.

If we haven't already, we would like to hear from you. Please take some time to complete this questionnaire and return it in the box marked "Questionnaires." Or take the questionnaire home with you and **return it by Monday, May 4** to any of the locations below.

- **Fax** to City Hall at 604-985-8439
- **Mail** to City Hall at Engineering Dept., City of North Vancouver, 141 West 14th Street, North Vancouver, BC V7M 1H9
- **Drop off** at City Hall between 8:30 a.m. and 5:00 p.m. at 141 West 14th Street
- **E-mail** to eng@cnv.org (indicate subject: Traffic Calming)

Copies of the questionnaire and display boards are available on the City's traffic calming web site at:

www.cnv.org/LowerLonsdaleWest.

Lower Lonsdale West

Traffic Calming Plan

Traffic Calming Goals:

- To make streets safe for everyone – pedestrians, cyclists, motorists and residents
- To preserve and enhance the liveability of the neighbourhood

Lower Lonsdale West Area Map:



For more information please contact:

Daniel Watson
Transportation Planner
City of North Vancouver
Engineering, Parks and
Environment
Tel: 604- 982-3905
Email: dwatson@cnv.org

1. Residents have identified issues relating to short-cutting traffic, speeding, pedestrian safety, accidents and parking. Are there any additional traffic or transportation issues in your neighbourhood that you would like us to know about? If so, please be as specific as possible regarding location, time of day, direction of traffic and so forth.

2. What traffic calming solutions you would like to see in your neighbourhood to address traffic and safety issues? Please identify specific locations where these solutions are needed.

3. Do you have any other comments?

4. Please provide your address (*this information will remain strictly confidential*)

Thank you for taking the time to complete this questionnaire.



NOTICE TO RESIDENTS OF THE LOWER LONSDALE WEST NEIGHBOURHOOD

TRAFFIC CALMING QUESTIONNAIRE

May 20, 2009

Dear Resident:

This booklet describes the proposed Traffic Calming Plan that has been developed for your neighbourhood, and includes a questionnaire for you to complete and return. The City of North Vancouver initiated the traffic calming process in your neighbourhood in response to concerns expressed by residents regarding speeding, pedestrian safety, short-cutting traffic and other safety issues on neighbourhood streets.

CONTENTS

Questionnaire	insert
Features of the Traffic Calming Plan	3
What happens next?	7
More information	7
How to return completed questionnaires	8

The primary objectives of the proposed Traffic Calming Plan are:

- **Safety** — make neighbourhood streets safer for everyone, including pedestrians, cyclists, children and motorists.
- **Livability** — restore and enhance the livability of the neighbourhood.

The proposed Traffic Calming Plan was developed by traffic calming consultants with the assistance of City staff and a Neighbourhood Traffic Residents' Association (NTRA) comprised of nine resident volunteers from the neighbourhood. The NTRA assisted consultants in identifying neighbourhood issues, soliciting input from other residents and reviewing various solutions to include in the Traffic Calming Plan.

We need to hear from you!

We want to know what you think of the proposed Traffic Calming Plan. Please review the plan described in this booklet, and tell us whether or not you support the proposed solutions by completing the enclosed questionnaire. We want to be sure that the best possible plan is carried forward, and that the community supports the Traffic Calming Plan.

Please examine the plan, fill out the questionnaire, and **return your completed questionnaire to us by Friday, June 5**. If you would like more information about the Traffic Calming Plan, we invite you to drop in at our **Open House on Thursday, May 28** at **John Braithwaite Community Centre** (145 West 1st Street), **any time between 6:00 pm and 8:30 pm**. City staff, consultants and NTRA members will be available to answer your questions.

How did this come about?

In March 2001, City Council adopted a Traffic Calming Policy as the City's first step in addressing reported traffic and safety issues on neighbourhood streets. Lower Lonsdale West will be the seventh neighbourhood for which a Traffic Calming Plan has been developed.

The neighbourhood walkabout on April 19 was the first community event held, followed by an Open House on April 28. Both events provided an opportunity for residents to tell us about their concerns, and provide suggestions and ideas for improving safety and traffic conditions in the neighbourhood.

The Traffic Calming Plan

The proposed Traffic Calming Plan is illustrated on page 7 and is described on the following pages. The plan addresses the traffic concerns that residents have identified — speeding, short-cutting traffic and pedestrian safety. Please examine all aspects of the Traffic Calming Plan, and think of how it would affect the safety and livability of neighbourhood streets.

Please note that some topics which residents identified could not be addressed in the Traffic Calming Plan. These include street lighting, road maintenance, parking enforcement and noise issues. These and other related issues will be addressed separately by the City. Enquiries regarding sidewalks and parking should be directed to the Engineering Department at 604-983-7333.

Features of the Traffic Calming Plan

The proposed Traffic Calming Plan includes the following features:

- **Speed humps** are effective in preventing speeding, and also improve safety. Speed humps are proposed on 4th, 5th, 6th, 8th and 12th Streets to address speeding problems and discourage shortcutting along these

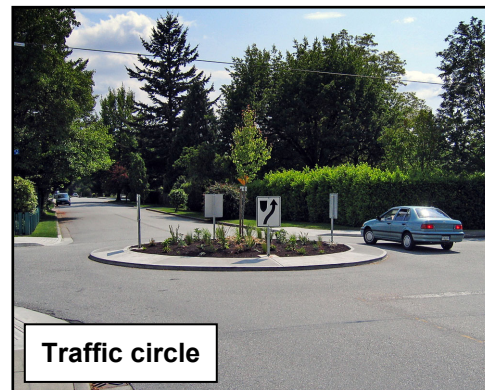
streets. Speed humps are also proposed in the lane west of Lonsdale Avenue between 3rd and 4th Street to reduce short-cutting.

Speed humps are not the same as the speed “bumps” used in shopping mall parking lots or residential lanes. Speed humps are 4 metres (13 feet) long, and are used on local streets such as 4th, 5th, and 6th. At moderate vehicle

speeds, speed humps gently rock a car, whereas at higher speeds, there is more of a jolt. The result is that motorists typically slow to about 30 to 40 km/h traveling over speed humps. They do not affect parking — motorists can park on top of a speed hump. They also do not typically increase traffic noise, and are safe for bicycles. A local example of speed humps is on Ridgeway between 16th and 22nd.



- **Traffic circles** are raised landscaped islands placed in the centre of an intersection to safely control traffic without using stop signs or traffic signals. They require motorists to slow down and drive around the traffic circle in a counter-clockwise direction. Traffic circles improve safety for pedestrians and other road users, and have been shown to reduce collisions by up to 80%. Traffic circles also discourage speeding.



Traffic circles work best at intersections of local streets. Two optional traffic circles are proposed on Mahon Avenue at 2nd Street and 4th Street to improve intersection safety, discourage speeding on east-west streets, and discourage shortcutting through the neighbourhood. Local examples of traffic circles are on St. Andrews, Ridgeway and Moody south of 13th Street. Please see the attached questionnaire to provide your input regarding these traffic circles.

- **Raised crosswalks** combine speed humps with a marked crosswalk. This slows motorists at the crosswalk, and enhances pedestrian safety. Raised crosswalks can be used to discourage speeding and shortcutting. A raised crosswalk is recommended 2nd Street between Semisch Park.



- **Curb extensions** involve extending the curb on one or both sides of the roadway, narrowing the width of the road between the curb extensions. Curb extensions improve pedestrian safety by increasing the visibility of pedestrians and reducing the crossing distance. Curb extensions also improve safety by improving sight lines for motorists turning to and from a side street, and by discouraging high-speed turns. Existing curb extensions are located at several intersections along Chesterfield Avenue. New curb extensions are proposed on Chesterfield Avenue at 5th Street.



- **Driver feedback signs** incorporate a radar speed detector and an illuminated display to provide immediate feedback to approaching motorists, advising them of their speed relative to the posted speed limit. Driver feedback signs are similar to those used by Speed Watch patrols, with the key difference being that driver feedback signs are installed permanently, and function 24 hours a day, 7 days a week. Experience in the U.S. and the U.K. indicates that driver feedback signs are effective in discouraging speeding. Optional driver feedback signs are proposed on 13th Street adjacent to Queen Mary Elementary School. Please see the attached questionnaire to provide your input regarding these driver feedback signs.



- **Marked crosswalks.** New marked “zebra” crosswalks with curb extensions are proposed on Chesterfield Avenue at 5th Street. Marked “zebra” crosswalks with curb extensions are also proposed on 3rd Street at Mahon Avenue in conjunction with a special crosswalk (flashing yellow lights) to improve pedestrian safety. A marked crosswalk is also proposed on Chesterfield Avenue at 2nd Street, to connect the existing curb extensions.
- **Median extension.** A new median extension with marked “zebra” crosswalks are proposed in the centre of 1st Street at the intersections with Mahon Avenue and Semisch Avenue to improve pedestrian safety.
- **Stop signs** at the intersection at 1st Street and Mahon Avenue would be re-oriented to face east and west. This would improve safety for pedestrians crossing 1st Street at this intersection and for cyclists.

Parking restrictions at intersections

Many residents have expressed concerns regarding obstructed sight lines at intersections due to vehicles parked close to the intersection. Pedestrians crossing these streets can be blocked from motorists’ view by parked vehicles, and motorists turning onto these streets from side streets and lanes can find it difficult to see approaching traffic due to parked vehicles.

To address this issue — and in addition to the features of the Traffic Calming Plan described above — the City can implement parking restrictions which prohibit motorists from parking within one to two car lengths of the corner, so as to improve sight lines. These restrictions would be indicated with “No Parking” signs. Please answer Question 2 on the questionnaire to indicate whether or not, in general, you support such parking restrictions.

Emergency vehicles

Emergency vehicles — particularly fire trucks — can be affected by some traffic calming measures. Speed humps can add 3 to 10 seconds delay per hump/table, and traffic circles can add a few seconds delay as well. For some residents, this could mean up to 30 seconds additional time for emergency response. Most residents, however, consider this an acceptable trade-off given the benefits that traffic calming measures provide on a daily basis.

Speed bumps in lanes

Speed bumps can be installed in lanes to discourage speeding. Residential speed bumps are available through the Local Improvement Petition or Initiative process. At least half of the benefiting property owners must sign a schedule or petition in order for speed bumps to be installed.

Typically, three speed bumps are installed per lane depending upon the length and configuration of the lane. Property owners' share of the cost of installing residential speed bumps is \$600 per lane (plus any costs to pave lanes that are not already paved).

More information about speed bumps in lanes is available on the City's web site at <http://www.cnv.org/speedbumps>.

What happens next?

Questionnaire responses received by **Friday, June 5** will be tabulated, and the results will be presented at an open house on **Thursday, June 18** at John Braithwaite Community Centre — drop in any time between 6:00 and 8:30 p.m.

The results of the questionnaire will determine whether the Traffic Calming Plan has neighbourhood support, and is ready to be presented to City Council for approval. If Council approves the Traffic Calming Plan, implementation will commence in spring/summer 2010. The anticipated cost of implementing the Plan has been incorporated into the City's 10-Year Capital Program.

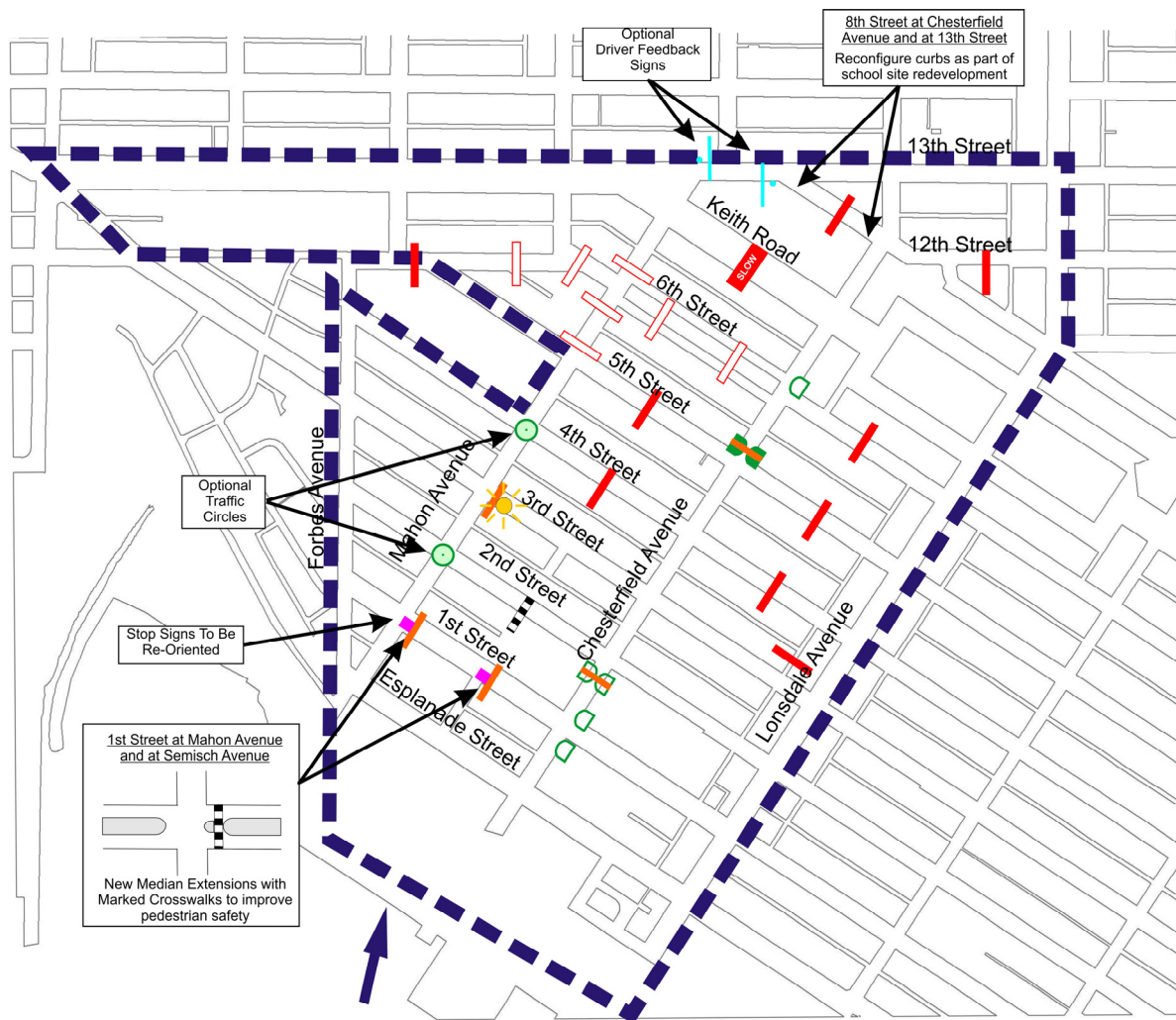
It is important to recognize that the Traffic Calming Plan is not cast in stone. During the first 6 to 12 months following implementation of the plan, the City will be monitoring traffic patterns in the neighbourhood. In the event that any problems persist or new problems arise, changes can be made to the plan to address these problems.

Beyond the 6-month to 12-month monitoring period, a permanent Neighbourhood Transportation Committee may continue to work with City staff to monitor traffic conditions in the neighbourhood on an on-going basis.












Lower Lonsdale West Neighbourhood Traffic Calming Plan

May 20, 2009

Page 7



Legend

- | | | | |
|---|--|---|-------------------------------|
|  | Speed Hump (existing or committed) |  | Crosswalk with Flashing Light |
|  | Speed Hump |  | Raised Crosswalk |
|  | Traffic Circle |  | Zebra Crosswalk |
|  | Curb Extension (existing or committed) |  | Driver Feedback Sign |
|  | Curb Extension |  | "Slow Down" Pavement Marking |
|  | Median Extension | | |

IMPORTANT DATES

Open House — Thursday, May 28 any time from 6 to 8:30 p.m.

Drop in any time between 6 and 8:30 p.m. at John Braithwaite Community Centre to ask questions about the proposed Traffic Calming Plan.

Return completed questionnaires by Friday, June 5

Open House — Thursday, June 18 any time from 6 to 8:30 p.m.

Drop in any time between 6 and 8:30 p.m. at John Braithwaite Community Centre to find out the results of the questionnaire.

More information

Information regarding the Lower Lonsdale West Traffic Calming Plan is available on the City's website at www.cnv.org/LowerLonsdaleWest. This questionnaire is available to download, plus copies of the display boards from the April 28 open house, and a brief "Introduction to Traffic Calming." The City's *Traffic Calming Program* is also available on the City's website, as well as information on traffic calming plans in other neighbourhoods.

If you do not have web access and would like more information regarding the proposed Traffic Calming Plan, please call the Engineering Department at 604-983-7333.

How to return completed questionnaires

Please take the time to complete this questionnaire and **return your completed questionnaire by Friday, June 5** to any of the locations below.

- **Fax** to City Hall at 604-985-8439.
- **Mail** to City Hall at Engineering Dept., City of North Vancouver, 141 West 14th Street, North Vancouver, BC V7M 1H9.
- **Drop off** at City Hall at 141 West 14th Street, between 8:30 a.m. and 4:30 p.m.
- **E-mail** to eng@cnv.org (indicate subject: Traffic Calming Plan).



Lower Lonsdale West Neighbourhood Traffic Calming Plan

Community Questionnaire

1. How do you feel about the proposed Traffic Calming Plan? Please indicate whether or not you support it, and if you do not feel strongly one way or the other, please indicate that you are neutral.

- I support the proposed plan
- I am neutral
- I do not support the plan

2. Please indicate how you feel about the option to restrict parking within one to two car lengths of corners at certain intersections where parked vehicles obstruct sight lines.

- I support parking restrictions at corners
- I am neutral about parking restrictions
- I do not support parking restrictions

3. Please indicate which options you support for providing traffic circles.

- I support only one traffic circle at the intersection of 2nd and Mahon
- I support only one traffic circle at the intersection of 4th and Mahon
- I support traffic circles at both locations
- I am neutral about traffic circles
- I do not support traffic circles at either location

4. Please indicate how you feel about the option of providing a driver feedback sign on 13th Street.

- I support driver feedback signs
- I am neutral about driver feedback signs
- I do not support driver feedback signs

5. Would you like to add any additional comments?

Please provide your address (it will be used for verification purposes only and will remain confidential): _____

Thank you for your response!

Please return this questionnaire by Friday, June 5 to any of the locations below.

- **Fax** to City Hall at 604-985-8439.
- **Mail** to City Hall at Engineering Dept., City of North Vancouver, 141 West 14th Street, North Vancouver, BC V7M 1H9.
- **Drop off** at City Hall at 141 West 14th Street, between 8:30 a.m. and 4:30 p.m.
- **E-mail** to eng@cnv.org (indicate subject: Traffic Calming Plan).



Parks Master Plan Open House

Tuesday, May 26 from 5:30pm - 8pm
Conference Rooms A & B, City Hall
141 West 14th Street

The City's **Parks Master Plan** is a strategic document that guides the renewal, development and maintenance of City parks and open spaces. The existing plan is being updated to reflect new policy direction, changing trends in demographics, and development opportunities.

Please join us at the Open House to share your ideas and help develop the future of our parks. Details at www.cnv.org/ParksMasterPlan or 604-983-7334.

Lower Lonsdale West Traffic Calming Plan Open House

Thursday, May 28 from 6pm – 8:30pm
John Braithwaite Community Centre
145 West 1st Street

The City is preparing a **Traffic Calming Plan** for the Lower Lonsdale West neighbourhood. The plan will address traffic issues on neighbourhood streets and examine ways to improve safety and accessibility for pedestrians, cyclists and transit users.

Please join us at the Open House to review the draft Traffic Calming Plan and provide your comments and feedback. Detailed information, including a questionnaire is available at www.cnv.org/LowerLonsdaleWest or 604-982-3905.

City News



Welcome to the May issue of City News. Distributed to residents and businesses in the City of North Vancouver, City News provides an opportunity to receive regular updates about City projects, programs and community events.



Parks Master Plan Open House

Tuesday, May 26 from 5:30pm - 8pm
Conference Rooms A & B, City Hall

The City's **Parks Master Plan** is a strategic document that guides the renewal, development and maintenance of City parks and open spaces. The existing Master Plan is being updated to reflect new policy direction, changing trends in demographics, and address development opportunities. Please join us and share your ideas to help develop the City's vision of the future of our parks. Details at www.cnv.org/ParksMasterPlan.

Lawn Sprinkling Regulations

Sprinkling restrictions are in effect throughout the City of North Vancouver from **June 1 – September 30**. Lawn sprinkling is only allowed from 4am - 9am and 7pm - 10pm. Even numbered addresses can use sprinklers on Wednesdays and Saturdays, while odd numbered addresses are permitted on Thursdays and Sundays. Details at www.cnv.org.

What's New?

Lower Lonsdale West Traffic Calming Plan

The City is preparing a **Traffic Calming Plan** for the **Lower Lonsdale West Neighbourhood** with the assistance of community residents.

Last month, the City held a neighbourhood walkabout and Open House to identify traffic and safety issues in this neighbourhood. Based on this feedback, a Traffic Calming Plan will be prepared to identify solutions to the identified issues. In mid-May, a questionnaire will be sent to households in this neighbourhood to obtain feedback on the proposed plan. As well, an Open House will take place on May 28th at John Braithwaite Community Centre. Details at www.cnv.org/LowerLonsdaleWest.

New Public Art In the City

The City recently installed a new public art sculpture as part of the **Mahon Park Rehabilitation Project**. Located at the entrance to Mahon Park on Keith Road, 'Out/Look' is a bronze sculpture perched on top of an upright 18 foot kiln dried cedar log. Artists Nancy Chew and Jacqueline Metz describe the piece as an expression of the overlap of the wild natural landscape and the groomed cultured landscape. Details at www.cnv.org/PublicArt.

Comments?

Tell us what you think. Do you have feedback about this newsletter, suggestions for future items, or other comments? We'd like to hear from you. Please share your thoughts by emailing CityNews@cnv.org.

City of North Vancouver
141 West 14th Street
North Vancouver BC
V7M 1H9

Tel: 604.985.7761
Fax: 604.985.9417
info@cnv.org
www.cnv.org

May 2009

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31						

IMPORTANT DATES

> *Green City Living Film & Speaker Series, May 19*

> *Parks Master Plan Open House, May 26*

> *Metro Vancouver Regional Growth Strategy Meeting, May 27*

> *Housing the North Shore Forum, May 27 - 28*

> *Traffic Calming Open House, May 28*

Become a Traffic Circle Gardener!

The City is seeking volunteers to care for traffic circle gardens in the Ridgeway neighbourhood. Meet friends and neighbours while learning new skills and helping to beautify your community. Details at www.cnv.org.

Green City Living Film & Speaker Series

Setting the Stage: The Facts on Climate Change

Tuesday, May 19 from 7pm - 9pm

Hosted by Mayor Darrell Mussatto

In the thought provoking film, **Climate Change Lower Mainland**, local filmmaker Rick Searle brings together local politicians and scientists from the University of British Columbia to discuss the impact that climate change is having on the Metro Vancouver area. In a string of compelling interviews, the film investigates the facts of climate change, bringing this global crisis to the local level. Host Mayor Darrell Mussatto will lead a discussion on how we can tackle this global issue in our City. Details at www.cnv.org/GreenCityLiving.



North Vancouver City Library Honoured with Major Award

The North Vancouver City Library recently received the BC Library Association's **Merit Award for New Buildings**. This prestigious award recognizes outstanding achievement in new buildings or a substantial renovation of facilities.

Located in the heart of the City at Lonsdale and 14th, the new City Library encompasses 36,000 square feet of public space on three levels. Library amenities include an expanded collection of 150,000 items, public computers, wireless access, a study hall, community meeting rooms, a children's reading garden, an area for teens, a café, public art, and underground parking. Details at www.cnv.org.

GardenSmart Workshop Series

Lawn Care: Maintaining your Lawn without Weed 'n Feed

Saturday, May 30 from 10am - noon

Maplewood Farm, 405 Seymour River Place

This hands-on workshop is your chance to discover the tips and tricks of natural lawn care. Dress for the weather - workshop is outdoors and you will have a chance to try various lawn care tools. Workshop is free, but registration is required. Call the Lynn Canyon Ecology Centre at 604-990-3755 for details.



Lower Lonsdale West TRAFFIC CALMING PLAN

June 5, 2009

Dear Resident:

You are invited to attend the Final Open House.

WHEN

**Thursday June 18, 2009
Drop in between 6:00pm and 8:30pm**

WHERE

**John Braithwaite Community Centre
(145 West 1st Street).**

The City of North Vancouver has prepared a Traffic Calming Plan for the Lower Lonsdale West neighbourhood in response to concerns expressed by residents regarding speeding, pedestrian safety, short-cutting traffic and other safety issues on neighbourhood streets. The plan addresses traffic issues on neighbourhood streets and examines ways to improve safety and accessibility for pedestrians, cyclists and transit users.

The proposed Traffic Calming Plan was developed by traffic calming consultants with the assistance of City staff and a Neighbourhood Traffic Residents' Association (NTRA) comprised of nine resident volunteers from the neighbourhood. The NTRA assisted consultants in identifying neighbourhood issues, soliciting input from other residents and reviewing various solutions to include in the Traffic Calming Plan.

The Traffic Calming Plan has been developed based on extensive input from the community, including:

- A Neighbourhood Walkabout on Sunday, April 19;
- The first public Open House on Tuesday, April 28;
- A Newsletter and Community Questionnaire that was distributed to all households and businesses in this neighbourhood in May; and
- A second Open House on Thursday, May 28.

If you would like more information about this Traffic Calming Plan, please visit the City's website at: www.cnv.org/LowerLonsdaleWest or contact Daniel Watson.

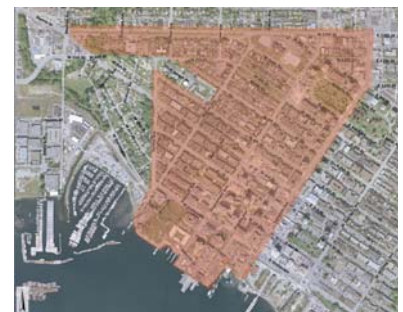
Lower Lonsdale West

Traffic Calming Plan

Traffic Calming Goals:

- To make streets safe for everyone – pedestrians, cyclists, motorists and residents
- To preserve and enhance the liveability of the neighbourhood

Lower Lonsdale West Area Map:



For more information please contact:

Daniel Watson
Transportation Planner
City of North Vancouver
Engineering, Parks and
Environment
Tel: 604- 982-3905
Email: dwatson@cnv.org