1.0 Purpose & Objectives

The purpose of this Policy is to provide Engineering Staff with a framework to assess, design and implement appropriate traffic calming measures on City streets. The objectives of this Traffic Calming Policy are to:

- Provide a system that prioritizes City streets for potential traffic calming measures
- Ensure consultation with affected stakeholders
- Enhance safety and convenience for all users
- Improve the neighbourhood environment
- Minimize conflicts between street users
- Reduce the number and severity of collisions
- Reduce the speed of motorized traffic
- Reduce the volume of traffic that has neither an origin or destination within a residential neighbourhood

1.1 Authority

The Traffic Calming Policy is developed and administered by the City of Kingston Engineering Department under the authority of the Traffic Manager and the Director of Engineering. This Policy has been approved by City Council on July 16, 2013.

1.2 Established Policy Direction

Existing policy direction regarding traffic calming or traffic operations is summarized below. This Policy has been completed in conformance with current policy direction and industry best practices.

The City of Kingston Official Plan (2010) contains guidance on corporate policy direction for the development of the City’s transportation system. Specific policy direction regarding traffic calming is included (see sections 4.6.11 and 4.6.15) and specifies that all development applications may be required by the City to consider traffic calming when implementing new public roads.

The Canadian Guide to Neighbourhood Traffic Calming (1998) is the industry standard in Canada for the design and implementation of traffic calming. The document contains guidance on all elements of a traffic calming project and is widely utilized in the transportation industry.
The City of Kingston Subdivision Development Guidelines & Technical Standards (2012) includes standards and best practices for the design, installation, maintenance and assumption of public roads for new development and redevelopment in the City. Proposals for traffic calming shall be in conformance with the standards established in this document.

The City of Kingston Cycling and Pathways Study (2003) is a guide for the implementation of cycling facilities within the City and includes brief discussion about the use of traffic calming in conjunction with cycling facilities. Opportunities to combine traffic calming measures and improvements to on-street bicycle facilities are encouraged.

2.0 Background

The City of Kingston receives numerous concerns from citizens every year regarding traffic on residential streets. The majority of these concerns are related to speeding, aggressive motorist behaviour and neighbourhood shortcutting. Residents are frustrated with this type of behaviour and insistent that the City take action to improve the quality of life and level of safety on their streets. To address these concerns, the City has developed this Traffic Calming Policy.

The definition of traffic calming as defined by the Institute of Transportation Engineers (ITE) is as follows:

“Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorized street users.”

2.1 The Hudson Drive Traffic Calming Pilot Project – 2004

The Hudson Drive Traffic Calming Pilot Project included the City’s first official traffic calmed street. At the conclusion of a Class Environmental Assessment (EA) process in 2004, it was recommended that a series of four speed humps and a pair of curb extensions be installed on Hudson Drive. A brief summary of the Hudson Drive Traffic Calming Pilot Project is included in Appendix 1.

It is important to note that due to changes to the Environmental Assessment (EA) Act in 2007, EAs are no longer required for traffic calming projects.
2.2 The City of Kingston Traffic Calming Policy 2007

In April 2007, the Environment, Infrastructure and Transportation Policies Committee accepted the results of the *Hudson Drive Traffic Calming Pilot Project Technical Evaluation* and directed Staff to develop a formal policy. The City of Kingston Traffic Calming Policy was subsequently adopted by Council later that year.

Between 2007 and 2012, 41 City streets were reviewed by the Engineering Department in conjunction with the terms of the Traffic Calming Policy. Complete details of the program during this period are provided in Appendix 2. Highlights of the program during this period include:

- Traffic calming plans were developed for a total of 21 streets on the list. Following the public consultation and voting process, traffic calming measures were installed on 11 streets.
- “Before” and “After” studies revealed that vehicle speeds decreased on all streets with traffic calming measures.
- Resident support for traffic calming measures was generally limited to speed humps, with little to no support for other proposed measures such as mini roundabouts or curb extensions.

In 2013, staff were directed to provide a summary of the results of the program, review the existing Traffic Calming Policy (2007 version) and provide recommendations to improve the program.

3.0 Traffic Calming Measures

Physical traffic calming measures include both vertical and horizontal measures. Descriptions of these measures are provided below.

3.1 Vertical Deflection

Vertical traffic calming measures include the following:

**Raised crosswalks** – a marked pedestrian crosswalk at an intersection or mid-block location that is constructed at a higher elevation than the adjacent roadway.

**Raised intersections** – an intersection, including crosswalks, that is constructed at a higher elevation than the adjacent roadway.
Rumble strips – raised buttons, bars or grooves closely spaced at regular intervals on the roadway that create both noise and vibration in moving vehicles.

Sidewalk extensions – A sidewalk is continued across a local street or intersection. For a “raised” sidewalk extension, it is continued at its original elevation, with the local roadway raised to the level of the sidewalk at the intersection. For an “unraised” sidewalk extension, the sidewalk is lowered to the level of the roadway.

Textured crosswalks – A crosswalk incorporating a textured and/or patterned surface which contrasts with the adjacent roadway.

Speed humps – A raised area of a roadway, which deflects both the wheels and frame of a traversing vehicle. Vehicles traversing a properly designed speed hump at a reasonable speed can drive with relative ease across the hump. Not to be confused with speed bumps, which are sometimes installed on private roadways and in parking lots and can be very abrupt and jarring to motorists. Only properly designed speed humps are recognized within the Canadian Guide to Neighbourhood Traffic Calming.

3.2 Horizontal Deflection

Horizontal traffic calming measures include the following:

Chicanes – A series of curb extensions on alternating sides of a roadway, which narrow the roadway and require drivers to steer from one side of a roadway to the other to travel through the chicane. Typically, a series of at least three curb extensions is used.

Curb extensions – A horizontal intrusion of the curb into the roadway resulting in a narrower section of roadway.

Curb radius reduction – The reconstruction of an intersection corner using a smaller radius, usually in the 3.0 m to 5.0 m range.

On-street parking – The reduction of the roadway width available for vehicle movement by allowing motor vehicles to park adjacent and parallel to the curb.

Raised median island – An elevated median constructed on the centerline of a two-way roadway through an intersection, which prevents left turns and through movements to and from the intersection roadway.

Mini roundabout – A raised island located in the center of an intersection, which requires vehicles to travel through the intersection in a counter-clockwise direction around the island.
Both vertical and horizontal measures shall be considered when implementing traffic calming, as opposed to the exclusive use of speed humps.

If traffic calming measures are installed in a heritage area, the local streetscape will be considered in choosing appropriate measures.

Traffic calming shall be implemented only on urban local and urban collector streets.

Traffic calming measures should be considered during the design and implementation of reconstructed streets and new residential subdivisions.

Opportunities to combine traffic calming and improvements to on-street bicycle facilities should be considered during the design and implementation process.

Although traffic calming measures can be very effective at reducing vehicle speeds, some potential drawbacks that need to be considered are as follows:

- Traffic may be diverted to parallel streets.
- Emergency service vehicles could be delayed.
- Increased noise from vehicle deceleration and acceleration.
- Increased maintenance.

Possible drawbacks should be considered when implementing traffic calming.

The Engineering Department will monitor the effectiveness of traffic calming measures through the completion of before and after studies that consider vehicle volumes, vehicle speeds and general roadway operations.

3.3 Supplemental Measures

Other measures may be utilized to supplement the physical traffic calming measures discussed in this section, including the following:

Public education – Any means of communication with residents to educate and inform about traffic calming measures, the reasons for implementation and the associated benefits.

Driver feedback/portable messaging signage – Permanent or temporary signage utilized to advise drivers of excessive speeds or modified road conditions with the intent to make drivers aware of undesired behaviour and increase awareness.
Traffic & Police Committee – Meetings conducted between the Engineering Department and Kingston Police to discuss traffic issues as they relate to enforcement, engineering and education.

Enforcement – Dedicated Police enforcement of posted speed limits and traffic laws on City streets.

While not all of the above noted measures are specifically considered to be traffic calming, they benefit the traffic calming program through public education, increased awareness and the enforcement of traffic laws.

- Supplemental measures may be considered in conjunction with, or as an alternative to, physical traffic calming measures where appropriate.

3.4 All-Way Stop Control

The Engineering Department receives a significant number of requests for all-way stop signs to be installed at intersections throughout the City as a traffic calming measure. The Canadian Guide to Neighbourhood Traffic Calming states the following with respect to the use of stop signs for traffic calming purposes:

“Stop signs used as a traffic calming measure may not be effective and may create compliance problems.”

The guide makes further comments regarding stop signs such as:

“Unwarranted installations require regular police enforcement”

“When stop signs are overused and/or unwarranted, compliance may decrease”

“When stop signs are unwarranted, vehicle speeds at mid-block locations may increase”

The Engineering Department uses warrants to determine where all-way stop control is required. These warrants consider vehicle and pedestrian volumes, vehicle split (percent of vehicles on the major street versus the minor street) as well as collision history.

- All-way stop control will NOT be considered as a traffic calming measure within the context of this policy.
3.5 Community Safety Zones & Reduced Speed Limits

In recent years, the Engineering Department has assessed the effectiveness of Community Safety Zones and reduced speed limit areas in the City.

Within the City, it has been determined that posting a street as a "Community Safety Zone" has not been effective at reducing vehicle speeds. Extensive research clearly shows that signage alone is not an effective traffic calming measure. Without constant and aggressive enforcement by police, motorists continue to drive at the speed that they are comfortable with, despite the Community Safety Zone signage. For this reason, the City no longer supports the installation of Community Safety Zones.

“Reduced maximum legal vehicle speeds used as traffic calming measures may not be effective and may create compliance problems. Raised crosswalks or speed humps would be more effective in reducing vehicle speeds.”

(Source: Canadian Guide to Neighbourhood Traffic Calming)

Council approved the “Guidelines for Establishing Posted Speed Limits” in 2011 in order to provide a framework to standardize posted speed limits within the City of Kingston. These guidelines outline how to establish appropriate posted limits in urban and rural areas as well as in school zones. The City began reducing speed limits in school zones in 2012 and by the end of 2013, most school zones in the City will be posted at 40 km/h. To reduce motorist confusion and simplify enforcement, the 40 km/h speed limit is in effect at all times as opposed to during school hours only.

- Community Safety Zones or reduced speed limit zones will NOT be considered as traffic-calming measures within the context of this policy.

4.0 Community Involvement

Community involvement is critical to the success of any traffic calming project. The Canadian Guide to Neighbourhood Traffic Calming states that:

“Traffic calming plans should be developed in consultation with the community. In some cases, ‘solutions’ to traffic problems have been developed without sufficient input from the community, and as a result have generated opposition which ultimately prevented the solutions from being implemented, or resulted in the solutions being removed. In many cases, opposition arose not because the solutions were ineffective but because they were not what the community wanted.”
Public meetings, public open houses and neighbourhood surveys can be important components of any neighbourhood traffic calming project.

As traffic calming measures may have a significant impact on a street, it is important to engage directly affected residents to obtain input and determine the level of acceptance for the proposed traffic calming measures.

- **An inventory of candidate streets for traffic calming measures shall be maintained by the Engineering Department in consultation with residents, members of Council, Staff and Kingston Police.**

- **In order to provide information to the affected community regarding traffic calming and to gauge the level of support, the Engineering Department will, in cooperation with the district Councillor, participate in a minimum of one public meeting to review the proposed traffic calming measures and receive input from affected stakeholders in conjunction with other means of public engagement, as required.**

- **All residents fronting or flanking the candidate street shall be directly notified of the proposed traffic calming measures in advance of public consultation to facilitate discussion with these key stakeholders.**

- **The Engineering Department will review all input received in the public consultation process and determine if implementation of traffic calming measures is appropriate. Where inadequate support is received from key stakeholders but the Engineering Department believes that the proposed plan has merit, the district Councillor shall be consulted and the proposal may be forwarded to Council for consideration.**

### 5.0 Criteria for the Implementation of Traffic Calming

The City of Kingston Engineering Department receives numerous requests for traffic calming. These requests must be assessed objectively in order to ensure that traffic calming is implemented appropriately. As funds are limited for the installation of traffic calming measures, there must be a method to screen, compare and rank the various traffic calming requests received by the City. Traffic volumes, speed studies, adjacent land use and a review of the collision history are all vital components of the traffic calming evaluation process.
5.1 Initial Screening

Any street to be considered for traffic calming measures should meet all of the following initial screening requirements in order to be assessed in further detail:

1) The posted speed limit must be 50 km/h or less; and
2) The 85th percentile speed must be greater than 50 km/h; and
3) Traffic volume must be greater than 1,000 vehicles per day (vpd); and
4) The street must function as an Urban Local or Urban Collector.

If the initial screening requirements are not met, the street will not be assessed in further detail unless the Engineering Department determines that there is merit in further evaluating the candidate street. Where a candidate street is not advanced for further investigation, it shall not be considered for a minimum of five years unless there have been significant changes to the traffic characteristics on that street.

A candidate street advanced through initial screening is given a more thorough review but is not guaranteed to proceed to the design and implementation phase. All candidate streets require a thorough investigation beyond the initial screening in order to determine their eligibility for traffic calming measures.

5.2 Criteria for Ranking Candidate Streets

Candidate streets that meet the initial screening requirements will be assessed in further detail and considered for implementation, pending the score and overall rank. As requests for traffic calming typically outweigh available funds, traffic calming projects will be prioritized according to the criteria illustrated in Table 1. The highest ranked projects will receive consideration for design, public consultation and implementation, subject to available funding. Candidate streets which do not achieve a high enough score may eventually be removed from the ranked list of streets.
## Table 1 - Traffic Calming Ranking System

<table>
<thead>
<tr>
<th>Category</th>
<th>Points Max.</th>
<th>Description</th>
</tr>
</thead>
</table>
| **SPEED**      | 25          | • 1 point for each km/h that the 85th percentile speed exceeds 45 km/h up to 10 points; and  
                  |             | • 2 points for each km/h that the 85th percentile speed exceeds 55 km/h         |
| **VOLUME**     | 20          | • 1 point for every 200 vehicles of daily traffic                             |
| **SCHOOLS**    | 20          | • 15 points for each adjacent school; and                                     |
|                |             | • 5 points for each nearby school                                           |
| **COLLISIONS** | 15          | • 1 point for each collision per kilometre in the previous five years; and     |
|                |             | • 5 points for each injury collision per kilometre in the previous five years |
| **PEDESTRIANS**| 10          | • 5 points if no continuous sidewalks on at least one side of the road; and   |
|                |             | • 5 points for each pedestrian generator (i.e. park, seniors centre, recreation centre, church, public institution, etc.) not including schools |
| **CYCLING**    | 10          | • 10 points for an on-street bicycle lane or signed bicycle route; or         |
|                |             | • 5 points for every 25 cyclists during an 8 hour traffic count               |
| **TOTAL SCORE**| 100         | Maximum                                                                      |

Note: Points are awarded based on the specific criteria listed for each category.
6.0 Summary of Traffic Calming Policy Directives

- Both vertical and horizontal measures shall be considered when implementing traffic calming, as opposed to the exclusive use of speed humps.

- Traffic calming shall be implemented only on urban local and urban collector streets.

- Traffic calming measures should be considered during the design and implementation of reconstructed streets and new residential subdivisions.

- Opportunities to combine traffic calming and improvements to on-street bicycle facilities should be considered during the design and implementation process.

- All-way stop control, Community Safety Zones and reduced speed limit zones will not be considered as traffic calming measures within the context of this policy.

- An inventory of candidate streets for traffic calming measures shall be maintained by the Engineering Department in consultation with residents, members of Council, Staff and Kingston Police.

- Traffic calming projects will be prioritized according to the City’s ranking system that considers traffic volumes, speed studies, adjacent land use and a review of the collision history. The highest ranked projects will receive consideration for design, public consultation and implementation, subject to available funding.

- In order to provide information to the affected community regarding traffic calming and to gauge the level of support, the Engineering Department will, in cooperation with the district Councillor, participate in a minimum of one public meeting to review the proposed traffic calming measures and receive input from affected stakeholders in conjunction with other means of public engagement, as required.

- All residents fronting or flanking the candidate street shall be directly notified of the proposed traffic calming measures in advance of public consultation to facilitate discussion with these key stakeholders.

- The Engineering Department will review all input received in the public consultation process and determine if implementation of traffic calming measures is appropriate. Where inadequate support is received from key stakeholders but the Engineering Department believes that the proposed plan has merit, the district Councillor shall be consulted and the proposal may be forwarded to Council for consideration.

- The Engineering Department will monitor the effectiveness of traffic calming measures through the completion of before and after studies that consider vehicle volumes, vehicle speeds and general roadway operations.
7.0 Review & Revision

This Traffic Calming Policy shall be reviewed by the Engineering Department at least every five years in order to confirm that it is consistent with industry best practices and corporate goals and objectives. Review and revision may be initiated more frequently at the request of Council or the Director of Engineering.

Revisions to the Traffic Calming Policy are summarized below.

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>Traffic Calming Policy adopted by Council</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>July 16, 2013</td>
<td>Traffic Calming Policy with revisions approved by Council</td>
</tr>
</tbody>
</table>
Appendix 1 – The Hudson Drive Traffic Calming Pilot Project – 2004

The Hudson Drive Traffic Calming Pilot Project included the City’s first official traffic calmed street. At the conclusion of a Class Environmental Assessment (EA) process in 2004, it was recommended that a series of four speed humps and a pair of curb extensions be installed on Hudson Drive. Due to changes to the Environmental Assessment Act in 2007, EA’s are no longer required for traffic calming projects.

In July 2005, four speed humps were installed on Hudson Drive between Bayridge Drive and Development Drive. A pair of curb extensions was installed on Hudson Drive adjacent to the parks in August of 2006. Following the installation of the traffic calming measures, no collisions were reported on this portion of Hudson Drive. Before the traffic calming measures were installed, there was an average of two collisions per year reported in this area. There was a slight reduction in vehicle volumes on Hudson Drive but this could be related to typical daily fluctuations in traffic flow.

Numerous vehicle speed surveys were conducted on Hudson Drive before and after the traffic calming measures were installed. The before surveys indicated that the typical 85th percentile speed (i.e. speed adhered to by 85% of all drivers) in this area was 56 km/h. After the speed humps were installed, the 85th percentile speed dropped to an average of 50 km/h. Speed surveys completed after the curb extensions were installed in addition to the existing speed humps, revealed that the 85th percentile speed was 51 km/h.

Emergency response providers including Kingston City Police, Frontenac Ambulance Services and the Kingston Fire Department were consulted several times throughout the traffic calming monitoring process. No comments were received that stated that there were any issues with respect to response times or patient discomfort after the traffic calming measures were installed.
In 2005, the cost to install each speed hump on Hudson Drive was $2600. This cost included installation, paint and signage. The total cost to install four speed humps was thus $10,400. The cost to install the pair of curb extensions on Hudson Drive in 2006 was $8600. Therefore the total construction cost of the Hudson Drive Traffic Calming Project was $19,000.

In April 2007, the Environment, Infrastructure and Transportation Policies Committee accepted the results of the Hudson Drive Traffic Calming Pilot Project Technical Evaluation and directed Staff to develop a Traffic Calming Policy, which was adopted by Council later in 2007.
Appendix 2 – Traffic Calming Summary – 2007 to 2012

The following is a summary of the requests for traffic calming that were received and considered by the Engineering Department between 2007 and 2012. Engineering Department staff requested two candidate streets from each member of Council each year for consideration of traffic calming.

From 2007 to 2012, 41 requests were received in total - see Figure 1.

- 10 of the total 41 requests (24%) were screened out from further review based on calculated 85th percentile speeds and daily traffic volumes. These 10 candidate streets did not meet the minimum screening requirements for further consideration since vehicle speeds and traffic volumes were not high enough. No further evaluation or preliminary designs were planned for these 10 streets.

![Figure 1 - Traffic Calming Summary - 2007 to 2012](image)

Of the remaining 31 requests:

- 10 of the total 41 requests (24%) have been evaluated and ranked and may be considered for preliminary design and public review. These candidate streets obtained a lower priority ranking and have not been advanced for design or review at this time.
• 21 of the total 41 requests (52%) have been preliminary designed and public reviewed – these candidate streets were further reviewed and proposed designs were developed for review with the public. Following public review and in accordance with the Traffic Calming Policy ...

✓ 11 were Implemented based on sufficient public support

× 10 were Not Implemented due to insufficient public support

Further details regarding the 21 streets having undergone design and public review are provided in the following tables. 85th percentile speeds and average daily traffic volumes (ADT), both before and after traffic calming measures, are shown in Table 1 where data has been collected.

Data collected during the “Before” and “After” studies has demonstrated that vehicle speeds decreased in all instances where traffic calming was implemented.

<table>
<thead>
<tr>
<th>Street</th>
<th>From</th>
<th>To</th>
<th>Speed Before*</th>
<th>Speed After*</th>
<th>ADT Before</th>
<th>ADT After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordnance</td>
<td>Barrie</td>
<td>Sydenham</td>
<td>48</td>
<td>43</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>Kingsdale</td>
<td>Centennial</td>
<td>Armstrong</td>
<td>57</td>
<td>47</td>
<td>2,900</td>
<td>2,900</td>
</tr>
<tr>
<td>Greenwood Park</td>
<td>Rose Abbey</td>
<td>Rainbow</td>
<td>54</td>
<td>38</td>
<td>3,750</td>
<td>1,600</td>
</tr>
<tr>
<td>Lakeview</td>
<td>Henderson</td>
<td>Front</td>
<td>63</td>
<td>39</td>
<td>1,300</td>
<td>550</td>
</tr>
<tr>
<td>Waterloo</td>
<td>Centennial</td>
<td>Taylor Kidd</td>
<td>57</td>
<td>46</td>
<td>3,700</td>
<td>1,300</td>
</tr>
<tr>
<td>McEwen</td>
<td>Bath</td>
<td>Henderson</td>
<td>60</td>
<td>52</td>
<td>3,400</td>
<td>1,800</td>
</tr>
<tr>
<td>MacDonnell</td>
<td>Princess</td>
<td>Brock</td>
<td>51</td>
<td>40</td>
<td>2,700</td>
<td>n/a</td>
</tr>
<tr>
<td>Mona</td>
<td>Woodbine</td>
<td>Woodside</td>
<td>52</td>
<td>45</td>
<td>2,800</td>
<td>2,500</td>
</tr>
<tr>
<td>Rideau</td>
<td>Cataraqui</td>
<td>Raglan</td>
<td>59</td>
<td>49</td>
<td>8,600</td>
<td>6,700</td>
</tr>
<tr>
<td>Queen Mary</td>
<td>Bath</td>
<td>Old Oak</td>
<td>59</td>
<td>49</td>
<td>7,400</td>
<td>4,600</td>
</tr>
<tr>
<td>Woodbine</td>
<td>Collins Bay</td>
<td>Bayridge</td>
<td>67</td>
<td>58</td>
<td>5,000</td>
<td>4,400</td>
</tr>
</tbody>
</table>

*indicates 85th percentile speeds
ADT – average daily traffic (vehicles)

Proposed traffic calming design elements that were reviewed by the public are shown in Table 2 for candidate streets where traffic calming was implemented and in Table 3 for candidate streets where traffic calming was not implemented. Traffic calming designs consisting of only speed humps were generally supported, although this was not always the case. In contrast, it was observed that proposed
traffic calming designs with traffic calming elements such as mini roundabouts and curb extensions typically did not receive adequate support from residents.

### Table 2 – Traffic Calming Implemented – Design Elements

<table>
<thead>
<tr>
<th>Street</th>
<th>From</th>
<th>To</th>
<th>Proposed Design Elements</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordnance</td>
<td>Barrie</td>
<td>Sydenham</td>
<td>speed humps, Courtesy Crosswalk</td>
<td>2012</td>
</tr>
<tr>
<td>Kingsdale</td>
<td>Centennial</td>
<td>Armstrong</td>
<td>speed hump, curb extensions/bus pads</td>
<td>2012</td>
</tr>
<tr>
<td>Greenwood Park</td>
<td>Rose Abbey</td>
<td>Rainbow</td>
<td>speed humps</td>
<td>2010</td>
</tr>
<tr>
<td>Lakeview</td>
<td>Henderson</td>
<td>Front</td>
<td>speed humps</td>
<td>2010</td>
</tr>
<tr>
<td>Waterloo</td>
<td>Centennial</td>
<td>Taylor Kidd</td>
<td>speed humps</td>
<td>2010</td>
</tr>
<tr>
<td>McEwen</td>
<td>Bath</td>
<td>Henderson</td>
<td>speed humps</td>
<td>2010</td>
</tr>
<tr>
<td>MacDonnell</td>
<td>Princess</td>
<td>Brock</td>
<td>speed humps</td>
<td>2010</td>
</tr>
<tr>
<td>Mona</td>
<td>Woodbine</td>
<td>Woodside</td>
<td>speed humps</td>
<td>2010</td>
</tr>
<tr>
<td>Rideau</td>
<td>Cataraqui</td>
<td>Ringstead</td>
<td>speed humps, raised Courtesy Crosswalk</td>
<td>2010</td>
</tr>
<tr>
<td>Queen Mary</td>
<td>Bath</td>
<td>Old Oak</td>
<td>speed humps</td>
<td>2008</td>
</tr>
<tr>
<td>Woodbine</td>
<td>Collins Bay</td>
<td>Bayridge</td>
<td>speed humps, Courtesy Crosswalk</td>
<td>2008</td>
</tr>
</tbody>
</table>

### Table 3 – Traffic Calming Not Implemented – Design Elements

<table>
<thead>
<tr>
<th>Street</th>
<th>From</th>
<th>To</th>
<th>Proposed Design Elements</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grenadier</td>
<td>Highway 15</td>
<td>Chartwell</td>
<td>curb extensions, on-street parking</td>
<td>2012</td>
</tr>
<tr>
<td>Victoria</td>
<td>Oak</td>
<td>Concession</td>
<td>mini roundabouts, curb extension</td>
<td>2012</td>
</tr>
<tr>
<td>Helen</td>
<td>Franklin</td>
<td>Brock</td>
<td>mini roundabouts, speed humps</td>
<td>2012</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>Vista</td>
<td>Ringstead</td>
<td>mini roundabouts, speed humps, crosswalks</td>
<td>2012</td>
</tr>
<tr>
<td>Rose Abbey</td>
<td>Grenadier</td>
<td>Highway 15</td>
<td>speed humps</td>
<td>2010</td>
</tr>
<tr>
<td>Sutherland</td>
<td>Conacher</td>
<td>Conacher</td>
<td>speed humps</td>
<td>2010</td>
</tr>
<tr>
<td>Conacher</td>
<td>294</td>
<td>Sutherland</td>
<td>speed humps</td>
<td>2010</td>
</tr>
<tr>
<td>Regent</td>
<td>Princess</td>
<td>Brock</td>
<td>curb extension, speed humps</td>
<td>2008</td>
</tr>
<tr>
<td>Old Colony</td>
<td>Lancaster</td>
<td>Taylor Kidd</td>
<td>mini roundabout, curb extensions, speed humps, mountable median</td>
<td>2008</td>
</tr>
<tr>
<td>Hudson</td>
<td>Mona</td>
<td>Bayridge</td>
<td>curb extensions, speed humps, crosswalk</td>
<td>2008</td>
</tr>
</tbody>
</table>

Results of the traffic calming program between 2007 and 2012 were considered during the review and revision of the City of Kingston Traffic Calming Policy in 2013.