

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF SEPTEMBER 28, 2022

Item 16, Report No. 36, of the Committee of the Whole, which was adopted without amendment by the Council of the City of Vaughan on September 28, 2022.

16. ATHABASCA COMMUNITY TRAFFIC STUDY UPDATE

The Committee of the Whole recommends approval of the recommendation contained in the report of the Deputy City Manager, Public Works, dated September 20, 2022:

Recommendation

1. That this report be received.

Committee of the Whole (2) Report

DATE: Tuesday, September 20, 2022

WARD: 1

TITLE: ATHABASCA COMMUNITY TRAFFIC STUDY UPDATE

FROM:

Zoran Postic, Deputy City Manager, Public Works

ACTION: FOR INFORMATION

Purpose

To report on the key findings of the Traffic and Speed Management Study for the neighbourhood area surrounding Athabasca Drive, as directed by Council on June 22, 2021.

Report Highlights

- On June 22, 2021, Council directed staff to undertake a full neighbourhood Traffic and Speed Management Study for the neighbourhood area surrounding Athabasca Drive.
- The Traffic and Speed Management Study has now been completed providing recommendations to address the issues and concerns within the Community.
- Recommended traffic related measures include pavement markings, mobile changeable message devices, and speed display devices placed at strategic locations. Measures identified to enhance the environment for pedestrians include a pedestrian crossover at Hunterwood Chase south of Mapledown Way and a gateway treatment at Foot Hills Road and Kirby Road.
- Collaboration with members of the community continue to be a key focus to help raise awareness, maintain communication, and share information to enable a safe and secure neighbourhood.

Recommendation

1. That this report be received.

Background

On June 22, 2021, Council directed staff to undertake a neighbourhood Traffic and Speed Management Study for the Athabasca area, aligning with the MoveSmart Mobility Management Strategy (MoveSmart). An independent consultant was retained to undertake this study.

Residents of the Athabasca area have raised concerns about traffic and speeding within their community and requested traffic calming measures, traffic control measures and community road safety programs be considered.

At the Council meeting of June 22, 2021, Council directed staff to commence a neighbourhood Traffic and Speed Management Study for the Athabasca area aligned with the directions, programs and plans outlined in MoveSmart. Details of the Council direction are outlined in Item 23, Report No. 29, of the June 22, 2021 Council meeting. A progress report was provided in October 2021.

Specific measures (aligned with the MoveSmart) as identified in the October report have been implemented. The City has also launched the #SlowDownVaughan Campaign initiative, which has received positive feedback from the community.

CIMA+ has been retained by the City as an independent consultant to complete the comprehensive neighbourhood Traffic and Speed Management Study for the Athabasca area, to identify additional measures that can be considered to raise awareness and improve public safety for all road users. Community engagement forms an integral component of the study process.

The study reviewed the existing traffic issues, such as speed, traffic conditions and collision data, to inform and provide a set of recommendations that address these concerns and the traffic issues identified within the Athabasca community.

The study encompassed two areas:

- Area 1: the residential area to the west of Dufferin Street between Athabasca Drive and Hunterwood Chase, and
- Area 2: the residential area south of Kirby Road, west of Dufferin Street and north of Nevada Park. A study area map is included as Attachment 1.

A critical component of the study was engaging residents in the Athabasca community for public input.

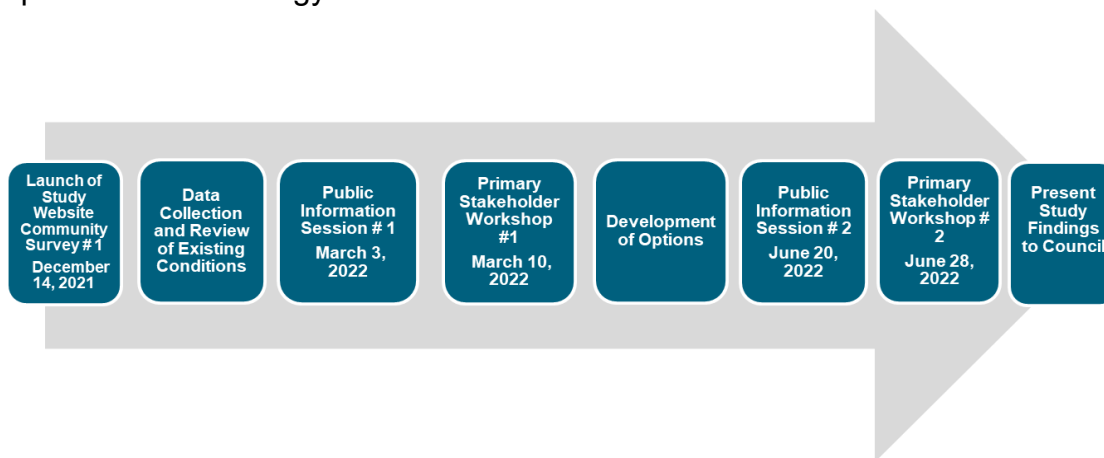
As part of the study process, the Corporate and Strategic Communications department deployed a range of engagement approaches to inform and engage the Vaughan residents, including those in the Athabasca community, about the launch of the study and engagement opportunities to participate in the study. Communications tools used included: the creation of project webpages, public service announcements, council

communications packages, engagement newsletters, and notifications using direct mail, social media, digital graphics, and mobile signs.

Residents completed an online survey at the onset of the study to identify existing traffic issues and identify the types of measures that would address their concerns. The community voiced speeding and inattentive driving as primary concerns and expressed interest for speed displays, increased enforcement, and traffic calming. A meeting conducted with a representative of the Ratepayers Association also identified general support for traffic calming measures, concerns regarding parking along Nevada Crescent near the neighbourhood park, and the consideration for the use of Automated Speed Enforcement.

Residents were invited to attend two virtual public information sessions (March 2022 and June 2022). The first public information session shared information about the review of the existing conditions, community survey, and gathered community feedback on potential solutions. The second public information session gathered feedback on traffic and speed management options and recommendations. Residents were also invited to complete either an online or hardcopy survey that was mailed to residents in the Athabasca community area, to provide their feedback on the proposed traffic calming recommendations. Feedback from participants in the survey shows overall support with the proposed recommendations.

Two stakeholder meetings were held with the City of Vaughan, York Region Transportation, York Regional Police, and York Regional District School Board. The purpose of the first meeting was to introduce the study, share information about the review of the existing conditions and the community survey, and gather input and feedback about the study area to help inform and shape potential study solutions. During the second meeting, stakeholders provided their feedback regarding the development of options and the evaluation process to inform and shape the implementation strategy.



Previous Reports/Authority

Traffic Study for Athabasca Community, Extract from Council meeting on June 22, 2021 (Item 23, Report No. 29):

<https://pub-vaughan.escibemeetings.com/filestream.ashx?DocumentId=77772>

Athabasca Community Traffic Study Progress Report, Extract from Council meeting on October 20, 2021 (Item 6, Report No. 46):

<https://pub-vaughan.escibemeetings.com/filestream.ashx?DocumentId=89159>

MoveSmart Mobility Management Strategy:

<https://www.vaughan.ca/projects/transportation/trafficstrategy/Pages/default.aspx>

Speed Limit Policy:

<https://www.vaughan.ca/services/residential/transportation/speed-limit-policy/Pages/default.aspx>

Vaughan Official Plan:

https://www.vaughan.ca/projects/policy_planning_projects/official_planning_2010/Pages/default.aspx

Pedestrian and Cycling Master Plan:

https://www.vaughan.ca/projects/projects_and_studies/pedestrian_master_plan/Pages/default.aspx

Analysis and Options

The following are the comprehensive neighbourhood Traffic and Speed Management Study findings for the Athabasca area.

Driving behaviour and inattentive driving were identified as the main issues in the Athabasca area.

Based on a review of the background information and data collected in January 2022, it was found that more than 70% of vehicle traffic in the Athabasca area travel at or below the posted speed of 40 kilometers per hour. The speed differential between the posted speed and the 85th percentile speed is on average, 3 km/hr which suggests most drivers are travelling at similar speeds and close to the posted speed limit. The driving behaviour of the remaining percentage of motorists can be considered as “speeding,” based on the interpretation of Section 128 of the Highway Traffic Act. In addition to speeding by a minority of drivers, inattentive driving was also noted as a major issue by the residents of the community, increasing the potential for traffic collisions.

Although the review of existing conditions did not identify parking as an issue, vehicle parking for extensive periods along Nevada Crescent to visit the Neighbourhood Park was identified as a concern by residents in the area, particularly during the winter months. Any measures regarding the restriction of on-street parking will require a thorough analysis, supported by a comprehensive review process. The City's By-law and Compliance, Licensing and Permit Services department is currently in the process of developing a city-wide parking strategy, which includes a review of long-term parking strategies. This will involve extensive consultation with City staff, other public agencies, and members of the public. Parking availability and associated impacts will be an important consideration in this work. The concerns expressed by residents in the Athabasca area will be forwarded and considered through the parking strategy.

A comprehensive evaluation process was undertaken to determine the proposed set of recommendations.

Traffic calming and traffic controls are measures that can be applied to manage vehicle speeds and to encourage responsible driving. A list of traffic and speed management options that consider passive speed management measures, along with others, were explored through this Traffic and Speed Management Study, with community input.

Potential locations for traffic control and speed management measures in the Athabasca community followed a 'self-enforcement' approach, where the evaluation focused on determining suitable alternatives that will effectively alter driver behaviour to reduce speeds, increase awareness and promote respect for non-motorized users, including pedestrians and cyclists. The proposed locations were therefore identified in a 'sequence' with the intent of altering the behaviour of drivers and generating a smooth 'slow-and-go' speed profile, where traffic calming measures, or existing traffic controls, are appropriately positioned in the roadway to maintain a desirable reduced speed along the entire corridor. To obtain this desirable speed, a separation of 150-metres between traffic controls and traffic calming measures was considered.

Once potential locations were determined, traffic calming measures were identified and evaluated for each location, based on their ability to alter driver behaviour at that specific location. The evaluation criteria included:

- **Speed Reduction**, which considered the effectiveness in reducing vehicle speeds;
- **Local Access**, which assessed any potential obstruction to local traffic, nearby driveways and private accesses;
- **Emergency Services**, which considered the effectiveness of any emergency service vehicle being able to respond in an appropriate timeframe;
- **Active Transportation**, which assessed the impacts to active transportation modes, such as pedestrians and cyclists;
- **Enforcement**, which looked at the on-going need for police officers to enforce the traffic calming measures to make them effective;

- **Parking**, which assessed the impacts to on-street parking provisions;
- **Maintenance**, which looked at the need for any maintenance and the effects on existing maintenance operations; and,
- **Cost**, which considered the estimated cost to implement each measure.

Implementation Timelines

The timeframes for implementing the measures identified through this speed management strategy may be categorized generally as short term or long term. Definitions for 'short-term' and 'long-term' were identified as:

- **Short-Term** - any recommendations that do not require significant modifications to existing infrastructure or do not require the involvement of other road authorities can be implemented in the short-term. These measures are generally implemented through existing City programs and contracts (such as pavement markings or signs) and are therefore recognized in the department's annual budgets.

Any proposed options that were identified for implementation in the short-term will be scheduled by staff for implementation and subsequently reviewed and monitored by staff to evaluate their suitability and overall performance at addressing the identified traffic and speed issues.

- **Long-Term** - any recommendations that may require the involvement of other road authorities, additional analysis or design will be implemented in the long-term. Long-term measures may be considered by staff through programs currently under review and therefore will take longer to implement. Due to higher costs or planning implications, long-term measures will require approval from applicable City departments as part of their annual allocation of budgets.

Additional speed management measures, focused on a community-based strategy have been identified to increase public awareness and encourage responsible driving in the Athabasca area.

Within Area 1, eleven suitable locations were identified, with three locations at the entrances to the Athabasca community from Dufferin Street, four locations along Athabasca Drive and four locations along Hunterwood Chase. Within Area 2, five suitable locations were identified, with two locations along Kirby Road, one location along Adirondack Drive and two locations along Nevada Crescent. The proposed recommendations for these areas are included in Table 1 and more detailed illustrations of these measures are provided and listed in Attachment 2.

Table 1: Proposed Recommendations

Location	Type of Measure	Implementation Timeframe
Location 1 - Dufferin Street and Athabasca Drive	Pavement markings , such as special stenciling (for example “SLOW”) to encourage reduced operating speeds.	Short-term
Location 2 - Athabasca Drive	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short-term
	Temporary Speed Cushions are being assessed as a new tool as part of the Neighbourhood Traffic and Speed Management Plan from the MoveSmart initiative in which new guidelines and procedures for these devices will be developed. Accordingly, the short-term measures listed for this location will be implemented and evaluated before considering the need for temporary speed cushions.	Long-term
Location 3 – Athabasca Drive and Kootenay Ridge	Refresh pavement markings , to clearly identify pedestrian crossings.	Short-term
Location 4 – Athabasca Drive south of Hunterwood Chase	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short-term
Location 5 – Athabasca Drive and Beakes Crescent	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short-term
Location 6 – Beakes Crescent and Dufferin Street	Pavement markings , such as special stenciling (for example “SLOW”) to encourage reduced operating speeds.	Short-term
Location 7 – Dufferin Street and Hunterwood Chase	Pavement markings , such as special stenciling (for example “SLOW”) to encourage reduced operating speeds.	Short-term
Location 8 – Hunterwood Chase west of Dufferin Street	Speed display devices are display signs used to give motorists real-time traffic and travel information, such as speeds.	Short-term

Location	Type of Measure	Implementation Timeframe
Location 9 – Hunterwood Chase north of Antonini Ct.	Speed display devices are display signs used to give motorists real-time traffic and travel information, such as speeds.	Short-term
Location 10 – Hunterwood Chase south of Mapledown Way	TYPE D Pedestrian crossover (potential) , which includes pavement markings, signs, and a raised crosswalk.	Long-term
Location 11 – Hunterwood Chase north of Athabasca Drive	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short-term
Location 12 – Kirby Street and Laurentian Boulevard	Pavement markings , such as special stenciling (for example “SLOW”) to encourage reduced operating speeds.	Short-term
Location 13 – Nevada Crescent south of Laurentian Boulevard	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short-term
Location 14 – Laurentian Boulevard and Nevada Crescent	Refresh pavement markings / ladder crosswalk to clearly identify pedestrian crossings.	Short-term
Location 15 – Foot Hills Road and Kirby Road	Gateway treatment , includes the provision of a continuous sidewalk and consideration for a dedicated cycling path or facility	Long-term
Location 16 – Adirondack Drive	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short-term

Implementation of this approach can also be suitable for other communities throughout the City of Vaughan since:

- Recommendations follows the warrant process identified by the City's Neighbourhood Traffic Committee Policy and Procedure as well as the guidelines of the Ontario Traffic Manual Book 15 and the Transportation Association of Canada's Canadian Guide to Traffic Calming (Second Edition).

- Recommendations considers the configuration of the roadway network servicing a community irrespective its location or development type.
- A set of physical, psychological, and educational measures can be used to address a diversity of traffic related issues, which aligns with the MoveSmart in general, and the Neighbourhood Traffic and Speed Management Plan under the Road Safety Program in particular.
- Implementation of recommended options can be scheduled in the short or long-term depending on budget availability and approval and alignment with other City's initiatives.

Financial Impact

The preliminary cost estimates for the proposed recommendations are provided in Table 2:

Table 2: Preliminary Cost Estimates

Type of Measure	Estimated Costs
Pavement Markings	~ \$1,500 lump sum cost for 5 painted symbols or characters ¹
Temporary Speed Cushion	~\$500 – \$1,000 per speed cushion
Mobile Changeable Message Device	~\$20,000 per device
Speed Display Device	~\$5,000 per device
Pedestrian Crossover (potential)	~\$7,000 - \$30,000 ²
Ladder Crosswalk	~\$3,000 per crosswalk
Gateway Treatment	Not Applicable at this time – dependent on City / Region

Estimated costs for Area 1 and Area 2, respectively, are presented in Table 3. A detailed cost estimation for each study area location will be required at the time of implementation.

Table 3: Estimated Costs for Area 1 and Area 2

Location	Timeframe	Estimated Costs (per location)
Area 1 ³	Short-term	up to \$95,000*
	Long-term	up to \$125,000

¹ Estimated cost for pavement markings is dependent on what is required to be painted.

² The \$30,000 estimated cost for the pedestrian crossover includes the design costs, traffic control requirements and staging, enhancements to pedestrian infrastructure, and basic signage and pavement markings for a Type D PXO. Lighting may be an additional cost if required. The estimated \$7,000 is based on a basic pedestrian crossover with signage and pavement markings, which does not include infrastructure improvements or traffic controls such as AODA related curb ramps or tactile plates.

³ Area 1 estimated costs are varied based on the use of a mobile changeable message device or a speed display device.

Location	Timeframe	Estimated Costs (per location)
Area 2 ⁴	Short-term	up to \$45,000

Does not include Pedestrian Crossover

Cost estimates for the proposed recommendations continue to be further refined as projects are implemented. Staff will develop a work plan to implement the traffic and speed management measures. Funding for implementation will be requested through the annual budget approval process. Staff will continue to explore opportunities, partnerships, and alternative funding sources to help support the strategy implementation. Regardless of the implementation timeframe identified for the proposed options, all implementations will be subject to budget approval. Subject to budget approval, the short-term measures will be implemented in summer 2023.

Broader Regional Impacts/Considerations

York Region staff were included in both Stakeholder Meetings as part of this study for the Athabasca Community.

Coordination with the Region is required as part of the Kirby Road Widening Municipal Class Environmental Assessment (MCEA) Study.

City staff will monitor planned changes in the area to confirm there are no adverse affects to the community. For example, the Schedule 'C' Municipal Class EA for improvements to Kirby Road, between Jane Street and Dufferin Street will address capacity and operational needs to accommodate planned growth in the area for pedestrians, cyclists, transit users and motorists. The recommended improvements include widening from two to four lanes and urbanization, in-boulevard cycle tracks and sidewalks, eliminating the jog at Kirby Road and Jane Street, and a grade separation (underpass) on the Barrie Go Rail line. No adverse affects to the Athabasca neighbourhood are anticipated from these improvements at this time.

Similarly, the City will hold discussions with the Region regarding changes on Dufferin Street as part of the Kirby Road Widening MCEA Study as necessary. Since the timing for implementation of initiatives for the EA study is currently unknown, any geometric modifications to existing intersections along Dufferin Street are considered long-term.

MoveSmart has identified Automated Speed Enforcement (ASE) technology as one of the main initiatives to be implemented.

The Province enacted Bill 65, *Safer school Zones Act*, 2017, to allow the operation of ASE technology in school and community safety zones. The Ontario Traffic Council (OTC) has been working with the Ministry of Transportation (MTO) and Ministry of the Attorney General (MAG) on developing the framework for the Administrative Monetary

⁴ Area 2 estimated costs are varied based on the use of a mobile changeable message device or a speed display device. Cost do not include gateway treatment.

Penalty Systems (AMPS) for ASE program. One of the main initiatives under MoveSmart is the implementation of ASE by 2024 which will provide a strong enforcement tool to help manage speeding. Staff are working closely with the Region to assess the data from their ASE pilot project and are in the process of working with OTC to develop the initial AMPS framework for the City's ASE program.

Conclusion

The Traffic and Speed Management Study has now been completed to address the community issues and concerns for the Athabasca Drive and surrounding area. Collaboration with members of the community continues to be a key focus to help raise awareness, maintain communication, and share information to enable a safe and secure neighbourhood.

In addition to the implementation of the recommended set of measures described in this report, the City should consider the following as part of future initiatives, programs and projects:

- Consideration for future implementation of Automated Speed Enforcement (ASE) as identified in the MoveSmart Strategy. The ASE program will provide a strong enforcement tool to help manage speeding.
- Consideration for guidance regarding the planning, design, operation and maintenance of the City's Street network to create spaces that will allow all road users to travel safely and comfortably.
- Consideration of the findings of this Study to update the City's Neighbourhood Traffic Committee Policy and Procedure, which is expected to consider traffic calming measures built into the development site plan from the inception.

For more information, please contact:

Peter Pilateris, Director, Transportation and Fleet Management Services, ext. 6141.

Attachments:

1. Study Area Map.
2. Traffic and Speed Management Study Athabasca Community Report, Executive Summary, CIMA+

Prepared by:

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Approved by:

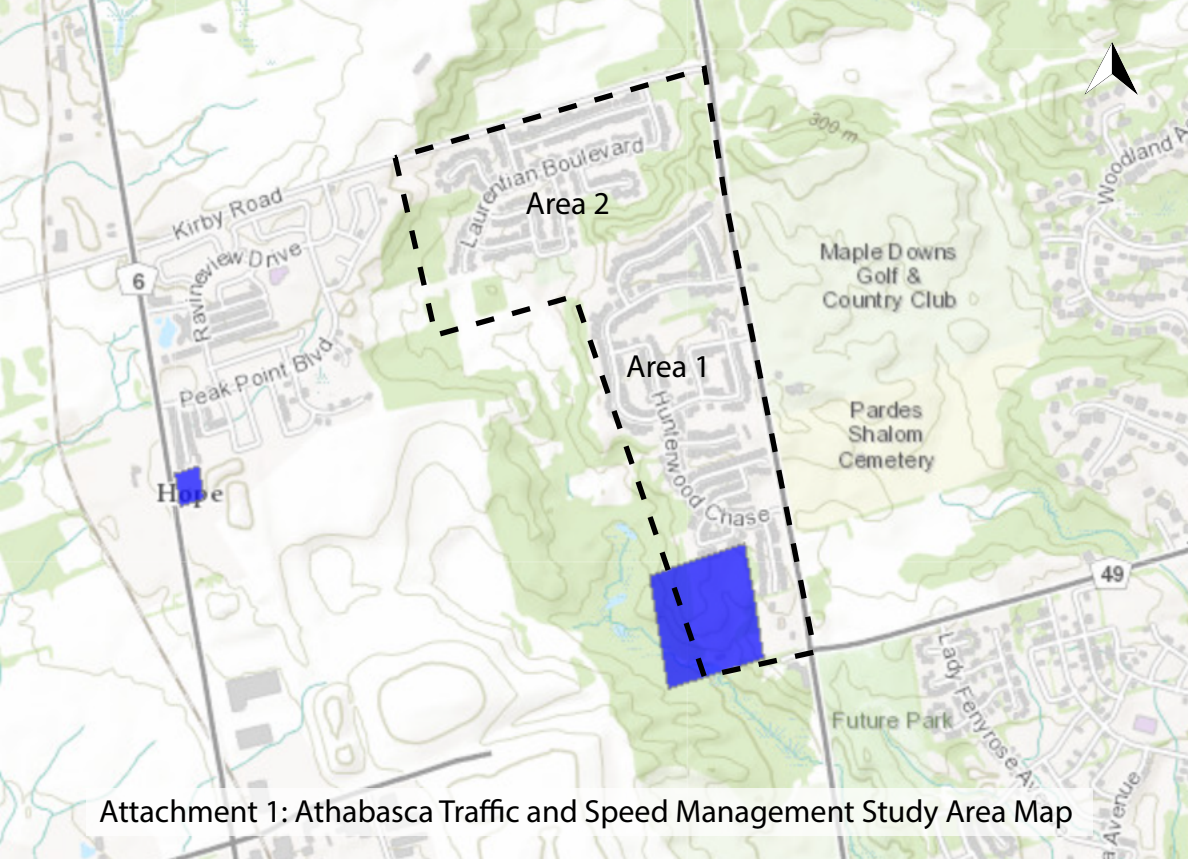


Zoran Postic, Deputy City Manager,
Public Works

Reviewed by:



Nick Spensieri, City Manager



Attachment 1: Athabasca Traffic and Speed Management Study Area Map

City of Vaughan

Traffic and Speed Management Study Athabasca Community Executive Summary

Friday, September 2, 2022

B001437



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Engineering for people

1 Executive Summary

On June 22, 2021, Council directed staff to undertake a full neighbourhood traffic and speed management study for the Athabasca community in the City of Vaughan. Residents of the Athabasca community raised concerns about speeding traffic within the area and requested traffic calming measures, traffic control measures and community road safety programs to be considered.

Traffic calming and traffic controls are measures the City can apply to manage vehicle speeds and to encourage responsible driving through physical design features (e.g., speed cushions) and/or passive measures (e.g., signage or pavement markings). These options, along with others, were explored through this Traffic and Speed Management Study.

The study reviewed the existing traffic issues, such as speed, traffic conditions and collision data, to inform and provide a set of recommendations that address these concerns and the traffic issues identified within the Athabasca community.

The study encompassed two areas; Area 1: the residential area to the west of Dufferin Street between Athabasca Drive and Hunterwood Chase, and Area 2: the residential area south of Kirby Road, west of Dufferin Street and north of Nevada Park.

A third area, the urban area bounded by Kirby Road to the north, Keele Street to the west, and identified as Area 3 during this study, was included for comparison purposes only.



Figure 1-1: Athabasca Community Study Area

Based on a review of the background information and data collection conducted in January 2022, it was found that more than 70% of vehicle traffic in the Athabasca community travel at or below the posted speed of 40 kilometres per hour, with the remaining percentage of motorists considered to be “speeding,” based on the interpretation of Section 128 of the Highway Traffic Act.

In addition to speeding, inattentive driving was also noted as a major issue by the Athabasca community, increasing the potential for traffic collisions. Although the review of existing conditions did not identify parking as an issue, vehicles parking for extensive periods along Nevada Crescent to visit the Neighbourhood Park was identified as a concern by residents in the area, particularly during the winter months.

Potential locations for traffic control and traffic calming measures in the Athabasca community followed a ‘self-enforcement’ approach, where the evaluation focussed on determining suitable alternatives that will effectively alter driver behaviour to reduce speeds and increase awareness and respect for non-motorized users, including pedestrians and cyclists.

The proposed locations were therefore identified in a ‘sequence’ with the intent of altering the behaviour of drivers and generating a smooth ‘slow-and-go’ speed profile, where traffic calming measures, or existing traffic controls, are appropriately positioned

in the roadway to maintain a desirable reduced speed along the entire corridor. To obtain this desirable speed, a separation of 150 metres between traffic controls and traffic calming measures was considered.

Once potential locations were determined, suitable traffic calming measures were identified and evaluated for each location, based on their ability to alter driver behaviour at that specific location. The evaluation criteria included:

- Speed Reduction, which considered the effectiveness in reducing vehicle speeds;
- Local Access, which assessed any potential obstruction to local traffic, nearby driveways and private accesses;
- Emergency Services, which considers the effectiveness of any emergency service vehicle being able to respond in an appropriate timeframe;
- Active Transportation, which assessed the impacts to active transportation modes, such as pedestrians and cyclists;
- Enforcement, which looked at the on-going need for law enforcement officers or police to enforce the traffic calming measures to make them effective;
- Parking, which assessed the impacts to on-street parking provisions;
- Maintenance, which looked at the need for any maintenance and the effects on existing maintenance operations; and,
- Cost, which considered the estimated cost to implement each measure.

A critical component of the study was engaging residents in the Athabasca community for public input. Residents were invited to complete an online survey at the onset of the study regarding existing conditions and concerns, as well as attend two virtual public information sessions (March 2022 and June 2022) to learn about the study and to provide their comments on the proposed solutions.

Following the second public information session in June 2022, residents were also invited to complete either an online or hardcopy survey that was mailed to residents in the community, as a way to provide their feedback on the proposed traffic calming recommendations.

Two Stakeholder Meetings were held following each Public Information Session. The purpose of the first meeting was to introduce the study, share information about the review of the existing conditions and the community survey, and gather input and feedback about the study area to help inform and shape potential study solutions. While the second meeting discussed the development of options and gathered input and

feedback about the evaluation process to help inform and shape the implementation strategy.

As a result of the technical analysis and feedback from the community and stakeholders, the following set of measures were identified as recommendations.

Table 1-1: Final Proposed Recommendations

Location	Type of Measure	Implementation Timeframe
Location 1 - Dufferin Street and Athabasca Drive	Pavement markings , such as special stenciling (for example “SLOW”) to encourage reduced operating speeds.	Short term
Location 2 - Athabasca Drive	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short term
	Temporary Speed Cushions are being assessed as a new tool as part of the Neighbourhood Traffic and Speed Management Plan from the MoveSmart initiative, in which new guidelines and procedures for these devices will be developed. Consequently, the short-term measures listed above for this location will be implemented and evaluated before considering the temporary speed cushions.	Long term
Location 3 - Athabasca Drive and Kootenay Ridge	Refresh pavement markings , to clearly identify pedestrian crossings.	Short term
Location 4 - Athabasca Drive south of Hunterwood Chase	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short term

Location	Type of Measure	Implementation Timeframe
Location 5 - Athabasca Drive and Beakes Crescent	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short term
Location 6 - Beakes Crescent and Dufferin Street	Pavement markings , such as special stenciling (for example “SLOW”) to encourage reduced operating speeds.	Short term
Location 7 - Dufferin Street and Hunterwood Chase	Pavement markings , such as special stenciling (for example “SLOW”) to encourage reduced operating speeds.	Short term
Location 8 – Hunterwood Chase west of Dufferin Street	Speed display devices are signs used to give motorists real-time traffic and travel information, such as speeds.	Short term
Location 9 – Hunterwood Chase north of Antonini Ct.	Speed display devices are signs used to give motorists real-time traffic and travel information, such as speeds.	Short term
Location 10 – Hunterwood Chase south of Mapledown Way	TYPE D Pedestrian crossover (potential) , which includes pavement markings, signs, and a raised crosswalk.	Long term
Location 11 – Hunterwood Chase north of Athabasca Drive	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short term

Location	Type of Measure	Implementation Timeframe
Location 12 – Kirby Street and Laurentian Boulevard	Pavement markings , such as special stenciling (for example “SLOW”) to encourage reduced operating speeds.	Short term
Location 13 – Nevada Crescent south of Laurentian Boulevard	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short term
Location 14 – Laurentian Boulevard and Nevada Crescent	Refresh pavement markings / ladder crosswalk to clearly identify pedestrian crossings.	Short term
Location 15 – Foot Hills Road and Kirby Road	Gateway treatment , includes the provision of a continuous sidewalk and consideration for a dedicated cycling path or facility	Long term
Location 16 – Adirondack Drive	Mobile changeable message device or a speed display device are used to give motorists real-time traffic and travel information, such as speeds.	Short term

