

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF APRIL 26, 2022

Item 8, Report No. 19, of the Committee of the Whole, which was adopted without amendment by the Council of the City of Vaughan on April 26, 2022.

8. NAPIER STREET AREA TRAFFIC REVIEW

The Committee of the Whole recommends:

- 1. That the recommendations contained in the following report of the Deputy City Manager, Public Works, dated April 12, 2022, be approved; and**
- 2. That all applicable by-laws be brought forward to the Council meeting of April 26, 2022.**

Recommendations

1. That the recommendation of a partial road closure with right in/right out access on Napier Street at Stegman's Mill Road, eliminating the left turn outbound movement be endorsed;
2. That the implementation of a southbound left-turn prohibition (anytime) and an eastbound left-turn prohibition (anytime) at the intersection of Napier Street and Stegman's Mill Road be approved;
3. That a By-law be enacted to amend By-law 284-94, the Consolidated Traffic By-law, to add a southbound left-turn prohibition (anytime) and an eastbound left-turn prohibition (anytime) at the intersection of Napier Street and Stegman's Mill Road;
4. That the implementation of a speed limit reduction on Islington Avenue from 150m north of Nashville Road to Highway 27, from 50km/h to 40km/h be approved;
5. That a By-law be enacted to amend By-law 284-94, the Consolidated Traffic By-law, authorizing the speed limit reduction from 50km/h to 40km/h on Islington Avenue from 150m north of Nashville Road to Highway 27;
6. That the implementation of a 40km/h Neighbourhood Area for the Napier Street community be approved, as set out in Attachment No. 6;
7. That a By-law be enacted to amend By-law 284-94, the Consolidated Traffic By-law, authorizing a maximum rate of speed at 40km/h for the Napier Street Neighbourhood Area; and
8. That the City Clerk forward a copy of this report to the Regional Municipality of York and York Regional Police.

Committee of the Whole (2) Report

DATE: Tuesday, April 12, 2022

WARD(S): 1

TITLE: NAPIER STREET AREA TRAFFIC REVIEW

FROM:

Zoran Postic, Deputy City Manager, Public Works

ACTION: DECISION

Purpose

To report on the findings of the feasibility study in examining the option of closing part, or all of Napier Street at Stegman's Mill Road, as directed by Council on November 17, 2020.

Report Highlights

- Council, at its meeting on November 17, 2020, directed staff to conduct a feasibility study to close part or all of Napier Street at Stegman's Mill Road, and to carry out public consultation, as deemed necessary.
- Staff completed a feasibility study and consultations with neighbourhood residents and key stakeholders.
- While the local roadways within the study area are operating as designed and are serving their intended function, higher speeds were observed on Islington Avenue, north of John Street and Stegman's Mill Road.
- Based on a sight line review, the left turn outbound movement at the intersection (southbound left turn) is the critical movement that restricts sightlines. Eliminating this left turn movement can reduce the potential for collisions. To increase safety at the intersection, a partial road closure with right in/right out access is preferred.
- Traffic measures have been identified to manage speed and improve traffic operations along Islington Avenue, north of John Street and Stegman's Mill Road.

Recommendations

1. That the recommendation of a partial road closure with right in/right out access on Napier Street at Stegman's Mill Road, eliminating the left turn outbound movement be endorsed;
2. That the implementation of a southbound left-turn prohibition (anytime) and an eastbound left-turn prohibition (anytime) at the intersection of Napier Street and Stegman's Mill Road be approved;
3. That a By-law be enacted to amend By-law 284-94, the Consolidated Traffic By-law, to add a southbound left-turn prohibition (anytime) and an eastbound left-turn prohibition (anytime) at the intersection of Napier Street and Stegman's Mill Road;
4. That the implementation of a speed limit reduction on Islington Avenue from 150m north of Nashville Road to Highway 27, from 50km/h to 40km/h be approved;
5. That a By-law be enacted to amend By-law 284-94, the Consolidated Traffic By-law, authorizing the speed limit reduction from 50km/h to 40km/h on Islington Avenue from 150m north of Nashville Road to Highway 27;
6. That the implementation of a 40km/h Neighbourhood Area for the Napier Street community be approved, as set out in Attachment No. 6;
7. That a By-law be enacted to amend By-law 284-94, the Consolidated Traffic By-law, authorizing a maximum rate of speed at 40km/h for the Napier Street Neighbourhood Area; and
8. That the City Clerk forward a copy of this report to the Regional Municipality of York and York Regional Police.

Background

In November 2020, Council directed staff to conduct a feasibility study to close part or all of Napier Street at Stegman's Mill Road and carry out public consultation. An independent consultant was retained to undertake a traffic operation and road safety review for the Napier Street area.

Napier Street is a local road with a 7.25m pavement width. The street is approximately 320m from Stegman's Mill Road to its northern limit. Napier Street intersects Kellam Street and John Street, which intersects Islington Avenue. Napier Street, John Street, and Kellam Street are local residential roadways with a statutory speed limit of 50km/h.

Islington Avenue is a north-south, two-lane, minor collector roadway. Islington Avenue has a posted speed limit of 40km/h from Major Mackenzie Drive to 150m north of Nashville Road.

Stegman's Mill Road is an east-west, two-lane, minor collector roadway. Stegman's Mill Road connects Islington Avenue to Teston Road. Stegman's Mill Road has a posted

speed limit of 40km/h. An unsignalized “T” intersection exists at Napier Street and Stegman’s Mill Road with a stop control on Napier Street.

The village of Kleinburg is not serviced by local transit. Sidewalks are provided along Islington Avenue and Stegman’s Mill Road (south side only). The local roadways of Napier Street, John Street, and Kellam Street within the study area do not provide any sidewalks. A location plan is included as Attachment No. 1.

At the November 17, 2020, Council meeting, staff were directed to undertake a feasibility study of closing part or all of Napier Street at Stegman’s Mill Road and carry out public consultation as deemed necessary. Progress reports were provided in January and June 2021.

The City retained Paradigm Transportation Solutions Limited as an independent consultant to conduct a comprehensive traffic operations and road safety review for the Napier Street area. The study included an assessment of roadway characteristics, traffic operations, a safety assessment of the Napier Street and Stegman’s Mill Road intersection, and the development of potential solutions. Stakeholder consultation and community engagement were part of the study process. An executive summary of the study is provided in Attachment No. 2.

Previous Reports/Authority

Traffic By-Law 284-94:

[Consolidated Traffic By-law 284-94](#)

Request for Road Closure at Napier St. and Stegman’s Mill, Extract from Council meeting of November 17, 2020 (Item 9, Report No. 54 of the Committee of the Whole):
[filestream.ashx \(escribemeetings.com\)](#)

Napier Street Road Closure Status Update, Extract from Council meeting of January 26, 2021 (Item 6, Report No. 1 of the Committee of the Whole):
[Committee of the Whole \(1\) Agenda \(escribemeetings.com\)](#)

Napier Street Road Closure Status Update, Extract from Council meeting of June 22, 2021 (Item 16, Report No. 32 of the Committee of the Whole):
[filestream.ashx \(escribemeetings.com\)](#)

MoveSmart – Mobility Management Strategy, Extract from Council meeting of March 10, 2021 (Item 1, Report No. 10 of the Committee of the Whole (Working Session)):
[filestream.ashx \(escribemeetings.com\)](#)

Establishing Speed Limits on City Roadways, Extract from Council Meeting of June 22, 2021 (Item 1, Report No. 31 of the Committee of the Whole (Working Session)):
[filestream.ashx \(escribemeetings.com\)](filestream.ashx (escribemeetings.com))

Analysis and Options

The following are the comprehensive traffic operations and road safety review findings.

While local roadways within the study area are operating as designed and are serving their intended function, higher speeds were observed on Islington Avenue, north of John Street and Stegman's Mill Road.

Extensive data collection was undertaken to profile the characteristics of the study area. This included traffic volume, speed, classification and collision data, and an origin-destination study. Data collection began in late April 2021 and was collected again in July 2021 and October 2021 to ensure representative travel data was obtained. The traffic speed and volume analysis findings for Napier Street and adjacent roads can be found in Attachment No. 2, figure E3.

The study findings determined daily traffic volumes along the local roadways within the study area are within the appropriate range for the roadway classifications.

The operating speeds on Islington Avenue and Stegman's Mill Road exceeded the posted speed limit of 40km/h, with operating speed (85th percentile speed) in the range of 55km/h to 56km/h, and 44km/h to 47km/h respectively.

Non-local traffic was identified as infiltrating through local residential streets; however, the overall volume and infiltration traffic was less than 16 vehicles during peak periods (inclusive of weekends and weekdays). The travel time study findings determined that using the Napier area streets to bypass the Islington Avenue and Stegman's Mill Road intersection resulted in a minor travel time savings from 2 to 26 seconds. Study area intersections were all operating at acceptable levels of service and within capacity.

A sightline assessment determined the outbound left turn movements at the intersection were identified as the critical movement with sightline restrictions.

The findings of a sight line assessment at the intersection of Napier Street and Stegman's Mills Road intersection determined the outbound left turn movement is the critical movement with restricted sightlines at the intersection.

Options to close part or all of Napier Street at Stegman's Mill Road to increase the level of safety at the intersection were developed in consultation with the community and key stakeholders.

A comprehensive public consultation and engagement campaign was conducted to collect resident feedback. This included a community meeting held virtually on November 23, 2021, followed by an online survey posted on the City's engagement platform *Have Your Say*, Vaughan, from November 23, 2021, to December 17, 2021. Additionally, a paper copy of the survey was mailed to the 33 households within the Napier Street study area. The public meeting and online survey were advertised and promoted through several outreach methods. Sixteen people attended the virtual public meeting. A total of 20 surveys were completed. A summary of the survey response from the public engagement report is provided in Attachment No. 3.

The options to close part or all of Napier Street at Stegman's Mill Road were presented to the community and key stakeholders. Details of the full road closure and partial road closure are outlined in Attachment No. 4 and 5.

Table 1: Proposed options for full road closure and partial road closure

Full Road Closure Options	Partial Road Closure Options
1A: A Cul-de-Sac	2A: A right in/right out and left in access from Stegman's Mill Road by implementing a physical island to restrict outbound left turn movements from Napier Street.
1B: Dead End – Curb reinstatement resulting in a dead-end	2B: A right in/right out access by implementing a physical island to restrict inbound and outbound left movements
1C: Gated Emergency Access – traffic/barrier gate	2C: A right in access by implementing a curb bump out to restrict outbound movements (allow inbound movements only)

Although the complete closure of Napier Street would eliminate traffic infiltration and sightline issues, it would restrict vehicle access for residents and non-residents alike. It would also not be feasible from an operational perspective.

The partial road closure options would improve traffic safety by eliminating the critical left turn movement at the intersection, reducing traffic infiltration, and minimizing traffic impacts to the surrounding road network. These options would also restrict access for residents and non-residents alike.

There is no evidence of reported collisions at the Napier Street and Stegman's Mill Road intersection.

A review to assess the safety performance of the Napier Street and Stegman's Mill Road intersection and adjacent roadways has been undertaken. The findings include the following:

- The review of available reported collision data did not identify any patterns or trends concerning reported collisions at the intersection.
- No fatal injuries were reported, nor any collisions involving pedestrians or cyclists were found. All reported collisions resulted in property damage only (no injuries).
- The recommended speed limit along Napier Street, John Street, and Kellam Street, based on a national guideline (TAC) assessment, is 40 km/h. The observed 85th percentile speed shows compliance within the recommended speed limit of 40km/h.

Based on community feedback and stakeholder input, the partial road closure right in/right out is preferred to improve road safety at the Napier Street and Stegman's Mill Road intersection.

Community support for the proposed options varies; however, both public meeting participants and survey respondents expressed the desire to improve the safety within the study area. A total of 20 surveys were received from the community and provided the following information:

- 75% of respondents confirmed they lived within the study area, while 25% chose not to disclose their addresses.
- 60% responded in support of a partial road closure, and based on the partial road closure options, the right in/right out access option was preferred.

In consultation with Fire Services, Roads Operations, Environmental Services (waste collection), York Region Emergency Services and York Region Traffic Safety, a partial closure of a right in/right out access is the preferred option to balance road safety and access.

Input from the community and stakeholders support a partial road closure of a right in/right out to improve road safety. A detailed design is required before construction. It is recommended to further consult with the community during the detailed design stage to inform residents about the design details and construction should this option be endorsed.

Interim measures (Attachment No. 7) are proposed to address the intersection prior to construction that include:

- Line painting with flexible bollards
- Turn prohibition with signage to restrict the southbound left turn and eastbound left turn at the subject intersection. The turn prohibition will remain after construction.

A communication plan that includes, but not limited to direct mail to area residents and temporary signage to inform the change in access configuration will be developed.

Additional traffic measures have been identified to manage speed and enhance traffic operations along roadways in the study area.

Speeding on Islington Avenue, north of John Street and Stegman's Mill Road, and the lack of sidewalks along the roadways in the study area have been identified.

To manage speed and enhance traffic operations, the following measures (aligned with plans and programs in the MoveSmart Mobility Management Strategy) are recommended for consideration:

- Artificial lane narrowing via pavement markings on Islington Avenue, north of John Street.
- Transverse speed pavement markings on Islington Avenue, north of John Street and Stegman's Mill Road, east of Napier Street.
- Lowering the speed limits on study area roadways (John Street, Kellam Street, Napier Street, Islington Avenue, north of John Street) to 40km/h to be consistent with adjacent roadway sections.
- Designation of the Napier Street area as a 40km/h Neighbourhood Area. A speed revision map is in Attachment No. 6.
- Increased warning signage to raise awareness of pedestrians with Slow tabs on study area roadways.
- Speed boards to be scheduled as part of the City's speed compliance program.

Financial Impact

The Kleinburg Village Improvements capital project 23-04RW with road reconstruction work, streetscaping and landscaping, and new active transportation facilities on Stegman's Mill Road is currently underway. The Kleinburg Parking Strategy provides solutions and strategies to manage parking in the short, medium, and long term. These

improvements support the City's continued commitment to ensuring the long-term sustainability of municipal infrastructure.

The design and construction of the proposed partial road closure with right in/right access can be incorporated into capital project 23-04RW with design in 2022 and construction in 2023. The estimated cost for design is \$13,185 and for construction is \$110,000.

Signage will be implemented for the speed limit revision on Islington Avenue and local roads within the study area. Line painting will also be implemented as recommended. The capital cost associated with the pavement markings and signage installation is estimated to be \$11,200 and is supported in the approved capital projects FL 9635-22 and FL-9579-21.

The ongoing maintenance cost for the sign and pavement markings will be incorporated in future Operating Budgets through the budget process.

Table 2: Estimated cost for pavement markings and signage

ITEM	ESTIMATED COST
SLOW DOWN Stenciled pavement marking	\$3,500
SLOW DOWN 40 KM/H Stenciled pavement marking/signs (Neighbourhood Area 40km/h)	\$3,300
Edgeline pavement markings	\$1,200
Speed Limit 40 km/h signs	\$1,100
Painted Median - Interim	\$600
Flexible Bollards - Interim	\$1000
Signage – left turn prohibitions	\$500
Total	\$11,200

Broader Regional Impacts/Considerations

The proposed turn prohibitions, and speed limit revisions on Islington Avenue, north of John Street to Highway 27 and the local roads within the study area will promote speed consistency and improve traffic operations.

Upon approval of the recommended turn prohibitions, and speed limit reductions, a copy of this report will be forwarded to York Regional Police for their awareness and to develop enforcement strategies.

Conclusion

The study area roadways serve their intended function within the overall transportation system. Speed reduction on study area roadways to 40km/h is recommended to

enhance traffic operations and ensure consistency in speed with adjacent roadway sections. Additional measures, including line painting, signage, and the implementation of a 40km/h Neighbourhood Area are also recommended.

Based on a sight line review, the left turn outbound movement at the intersection (southbound left turn) is the critical movement that restricts sightlines. A partial road closure with right in/right out access is preferred to increase safety at the intersection. The design and construction can be incorporated into the Kleinburg Village Improvements capital project with design in 2022 and construction planned in 2023. During the detailed design stage, further consultation with the community is recommended to inform residents about the design details and construction.

For more information, please contact Peter Pilateris, Director of Transportation and Fleet Management Services, ext. 6141

Attachments

1. Location Map – Study Area
2. Executive Summary Report – Paradigm Transportation Solutions Limited
3. Engagement Report Executive Summary - Lura
4. Full Road Closure Options for Napier Street at Stegman's Mill Road
5. Partial Road Closure Options for Napier Street at Stegman's Mill Road
6. Speed Limit Revision Map
7. Napier Street and Stegman's Mill Road Intersection – Interim measure

Prepared by

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In consultation with:

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Taylor Frank, Legal Counsel, 8537

Approved by



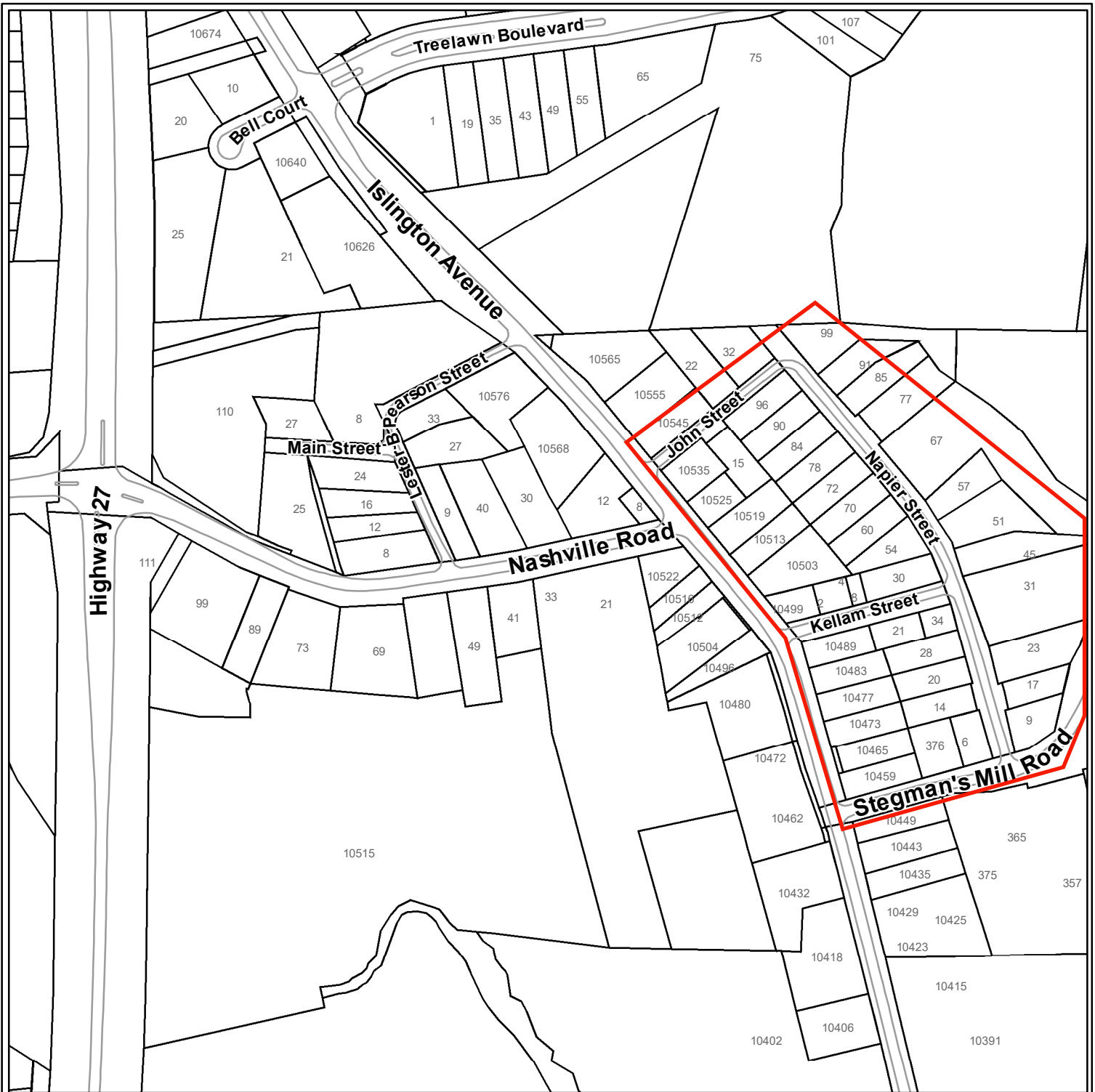
Zoran Postic
Deputy City Manager, Public Works

Reviewed by



Nick Spensieri, City Manager

ATTACHMENT No. 1



NAPIER STREET TRAFFIC REVIEW STUDY AREA



NOT TO SCALE

Attachment No. 2



City of Vaughan

**Napier Street Area
Traffic Operations and Road
Safety Study**

Paradigm Transportation Solutions Limited

December 2021
210004



Executive Summary

The City of Vaughan (the City) retained Paradigm Transportation Solutions Limited (Paradigm) to conduct the Napier Street Area Traffic Operations and Road Safety Study within the village of Kleinburg in the City of Vaughan, Ontario. The study area is bounded by Napier Street, Islington Avenue, Stegman's Mill Road and John Street.

Over the years, the City has studied traffic operations, intersection safety, and vehicle circulation within the study area in response to community requests. The City has implemented the following safety measures to date:

- ▶ A convex mirror at the intersection of Napier Street and Stegman's Mill Road to improve the sight visibility for outbound motorist movements
- ▶ Warning signage ("Hidden Intersection") on Stegman's Mill Road to inform motorists about the upcoming intersection
- ▶ Vegetation trimming on Stegman's Mills Road to improve sight lines

Paradigm was tasked with assisting the City as an independent consultant to review existing traffic operations and road safety conditions along with a review of existing traffic circulation and potential solutions.

Content

An objective review of Napier Street and the adjacent residential community area was undertaken to identify any design, operational and/or road safety issues. This included the following:

- ▶ A review of studies previously conducted
 - Findings from previous studies and/or investigations undertaken by City staff were reviewed and validated.
- ▶ A review and assessment of the study area roadway characteristics
 - Roadway classification and context within the surrounding transportation system;
 - Posted maximum speed limits; and
 - Roadway design including a high-level review of the cross-section, alignment, and sight distances.



- ▶ An assessment of traffic volumes, travel speeds, and travel routes along the study area roadways
 - Examination of daily and peak hour traffic volumes;
 - Vehicle operating speeds and travel times; and
 - Origin-destination routes through the adjacent residential area.
- ▶ A road safety review
 - Collision analysis;
 - Sight distance assessment; and
 - Speed limit review.
- ▶ A traffic operations review
 - Intersection operational analysis; and
 - Reviewing feasibility of closing the Napier Street/Stegman's Mill Road intersection from an operational perspective.
- ▶ Identifying potential mitigation measures
 - Applicable mitigation measures were assessed to address identified issues.

Study Findings

Background Studies

- ▶ The findings of this study validate and confirm findings from previous studies undertaken by City staff; and
- ▶ The exception would be, though we are in agreement with the previous staff findings that the overall magnitude of traffic infiltration occurring is low. A total of 10 to 15 vehicles were recorded as traffic infiltration (cut-through) during the weekday peak periods. A total of 5 to 16 vehicles were recorded as traffic infiltration (cut-through) during the weekend peak periods. Study area intersections were all found to be operating at acceptable levels of service and within capacity. Recognizing the presence of pedestrians, lack of sidewalks, and allowance for on-street parking, reducing the non-local cut through traffic would provide a more comfortable pedestrian environment, thereby encouraging more active modes of transportation.



Area Characteristics

- ▶ Islington Avenue and Stegman's Mill Road are both minor collector roadways with a posted 40 km/h maximum speed limit within the study area;
- ▶ On-street parking is permitted on Islington Avenue within the adjacent boulevard;
- ▶ Napier Street, John Street, and Kellam Street are local residential roadways. No maximum speed limit signage is posted; therefore, the statutory limit of 50 km/h governs; and
- ▶ Existing traffic calming measures are provided along the Islington Avenue corridor – speed humps at the north and south limits of the corridor. Additionally, a section of the roadway is designated as a "Community Safety Zone" at the south end of the corridor.

Overall it was determined that the study area roadways are operating as designed and are serving their intended function within the overall transportation system.

Transportation Conditions

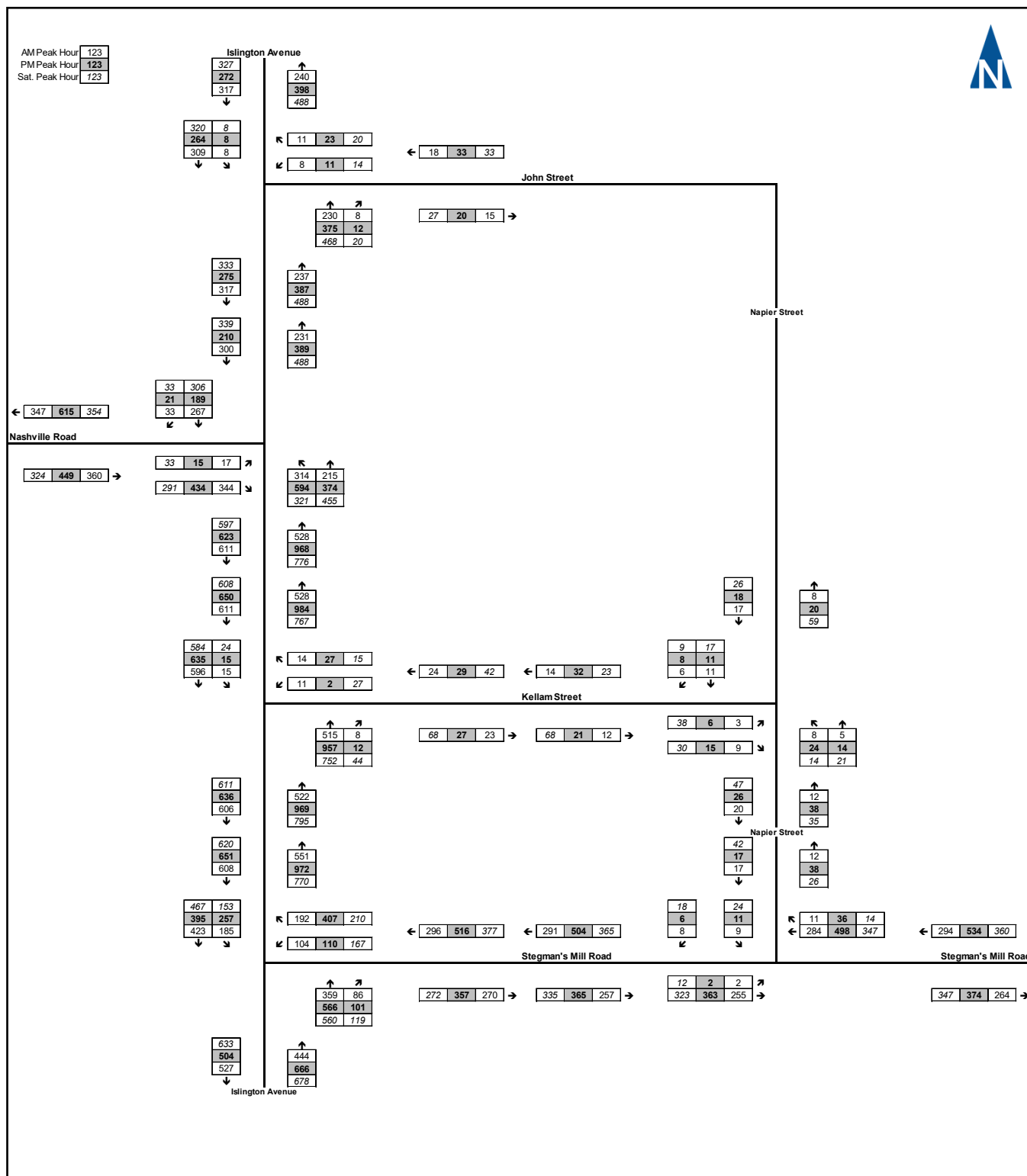
- ▶ The average two-way daily traffic volumes along the study area roadways are reported to be within range for their roadway classification;
- ▶ Vehicle operating speeds along the local roadways of Napier Street, John Street, and Kellam Street were found to be in the range of 40 km/h;
- ▶ Vehicle operating speeds along Islington Avenue, north of John Street and Stegman's Mill Road, east of Islington Avenue exceeded the posted maximum speed limit. High levels of non-compliance were reported for these sections from the speed study data; and
- ▶ Review of origin-destination survey data confirms that non-local traffic is infiltrating the residential streets of Napier Street, John Street, and Kellam Street to by-pass the Islington Avenue/Stegman's Mill Road intersection.

Figure E1, Figure E2, and Figure E3 illustrate the traffic infiltration volumes, intersection volumes, and travel speeds within the neighbourhood area.

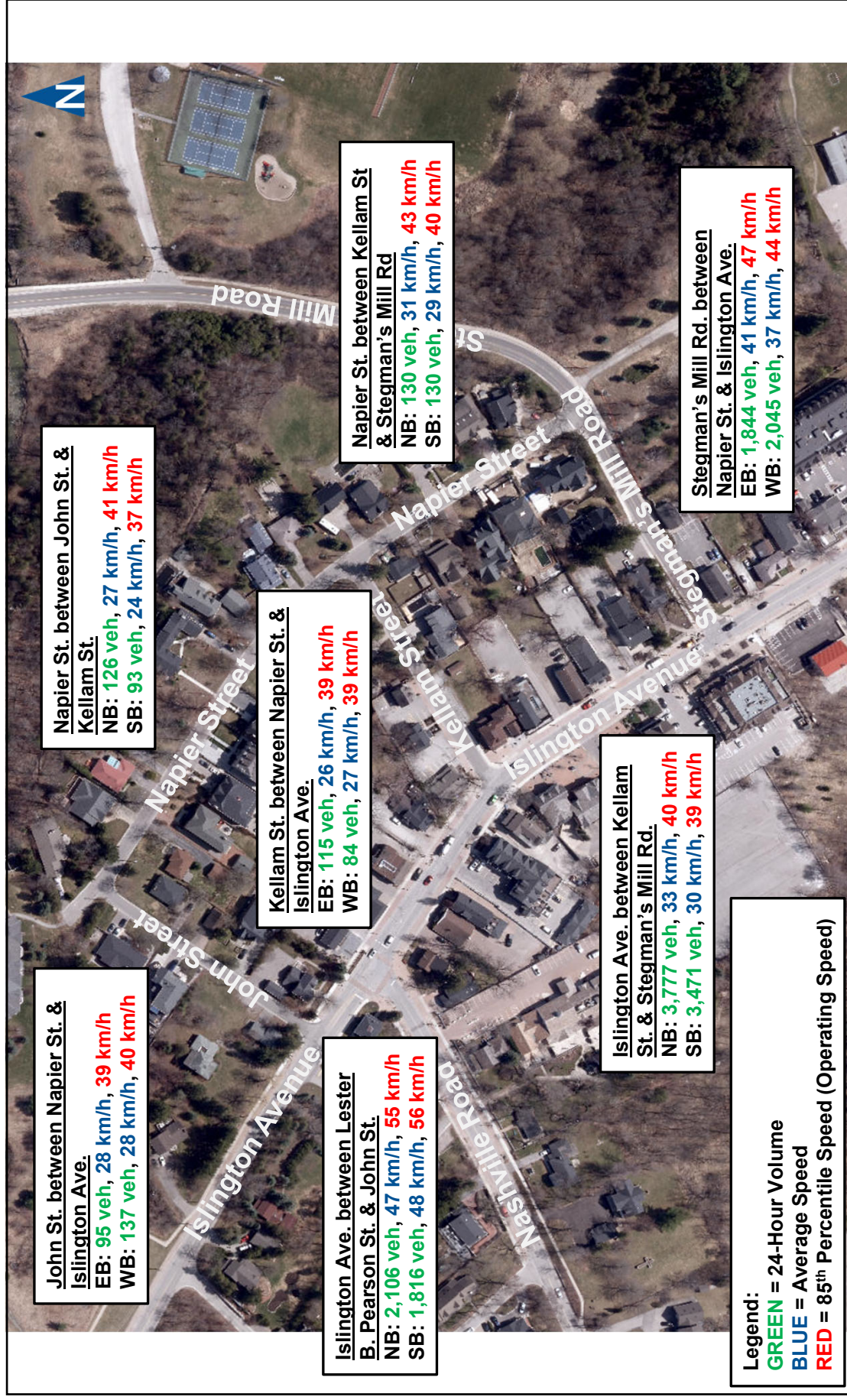
Overall it was determined that the study area roadways are operating as designed and are serving their intended function.







Peak Hour Intersection Volumes



Vehicle Speeds

The exception would be travel speeds for two noted sections. Islington Avenue, north of John Street and Stegman's Mill Road, east of Islington Avenue, exceeded the maximum posted limits with low compliance.

Non-local traffic was identified to be infiltrating through the local residential street; however, the overall magnitude of cut-through traffic was low.

Safety Review

- ▶ Review of available collision data indicates the number of yearly reported collisions and the resultant impact types as generally unremarkable with no identifiable patterns or trends concerning reported collisions;
- ▶ No fatal injuries were reported or collisions involving pedestrians or cyclists. All reported collisions were property damage only (no injuries);
- ▶ A detailed sight distance and sight line review were undertaken at the Napier Street/Stegman's Mill Road intersection. The available sight distances were determined to be deficient in comparison to TAC Guide requirements. The outbound left turn movement from Napier Street to Stegman's Mill Road was identified as a critical movement. Effectively, the available sight distances are equivalent to low travel speeds in the range of 20 – 30 km/h along Stegman's Mill Road, whereas the actual reported operating speeds were found to be in the range of 44 – 47 km/h;
- ▶ As the local residential roadways of Napier Street, John Street, and Kellam Street do not have posted speed limit signage, a speed limit review was undertaken. Based on the TAC Guidelines methodology, the recommended speed limit determined by road characteristics along Napier Street, John Street, and Kellam Street is 40 km/h. The observed 85th percentile speed shows compliance with the recommended speed limit.

Overall, the reported collision incidences are generally unremarkable.

While the overall magnitude of cut-through traffic volumes is noted to be low – Recognizing the presence of pedestrians, lack of sidewalk, and allowance for on-street parking, reducing the non-local cut through traffic would be beneficial to improving traffic operations and providing a more comfortable pedestrian



environment thereby encouraging more active modes of transportation.

The potential safety concern is the sight distance deficiencies documented at the Napier Street/Stegman's Mill Road intersection for outbound left turn movements. The lack of collisions reported at this location is surprising – however, not entirely given the low volume and the fact it may be a by-product of users of this intersection exercising extreme caution when traversing through (i.e., familiar with the issues); however, this may be a potential future collision waiting to occur for a motorist unfamiliar with this location.

Traffic Operations Review

- ▶ The analysis of existing conditions indicates that all traffic movements at the study area intersections are currently operating at acceptable levels of service and well within capacity; and
- ▶ Feasibility of closing the Napier Street/Stegman's Mill Road intersection was confirmed possible. The redistribution of traffic to adjacent intersections was determined to result in imperceptible operational impact.

Study area intersections were all found to be operating at acceptable levels of service and well within capacity.

The exceptions would be at the two all-way stop controlled intersections. While they report acceptable operations, the volume of pedestrian crossings across each roadway approach may result in an additional delay to motorists.

Since motorists and pedestrians have a varying degree of understanding on who has the right-of-way, the vehicular delay experienced will vary (i.e., motorists are aggressive and do not yield to pedestrians, or motorists will yield the right-of-way, allowing large groups of pedestrians to cross). The latter may contribute to non-local traffic infiltrating the adjacent local streets to by-pass.

Multi-Modal Transportation Review

- ▶ The village of Kleinburg is not serviced by local transit;
- ▶ The study area currently does not provide any bicycle infrastructure to accommodate cyclists;



- ▶ The pedestrian infrastructure throughout the area is discontinuous. Sidewalk is provided along Islington Avenue and Stegman's Mill Road (south side only). The remaining local roadways of Napier Street, John Street, and Kellam Street within the study area do not provide any sidewalks; and
- ▶ It was documented during the in-field investigations, several pedestrians were observed walking and jogging along Napier Street, John Street, and Kellam Street (the local residential streets).

Pedestrian infrastructure within the study area is discontinuous. The local residential streets do not provide infrastructure connecting with the larger municipal network.

The study area lacks cycling infrastructure. As dedicated facilities are not provided, cycling trips are either made within the travelled roadway shared with other vehicles or on the sidewalk (where available).

The options to close part or all of Napier Street at Stegman's Mill Road

Options to close part or all of Napier Street to increase safety at the intersection were developed. These include:

Three options for a full road closure of Napier Street at Stegman's Mill Road were considered:

- ▶ Option 1A: A Cul-de-Sac
- ▶ Option 1B: Dead End – curb reinstatement along with bollards or other similar permanent traffic barriers, resulting in a dead-end
- ▶ Option 1C: Gated Emergency Access – Traffic/barrier gate

Three options for the partial road closure of Napier Street at Stegman's Mill Road were considered:

- ▶ Option 2A: A right in/right out and left in access from Stegman's Mill Road by implementing a physical island to restrict outbound left turn movements from Napier Street
- ▶ Option 2B: A right in/right out access by implementing a physical island to restrict inbound and outbound left movements
- ▶ Option 2C: A right in access by implementing a curb bump out to restrict outbound movements (allow inbound movements only)



The full closure of Napier Street would eliminate traffic infiltration and sightline issues; it would restrict vehicle access for residents and non-residents alike and would not be feasible from an operational perspective.

The partial road closure options would improve traffic safety by eliminating the critical left turn movement at the intersection; it would restrict vehicle access for residents and non-residents alike (based on the access configuration) and reduce traffic infiltration.

Community Engagement

A community meeting was held virtually on November 23, 2021, followed by an online survey posted to the City's engagement platform "Have Your Say, Vaughan" from November 23, 2021, to December 17, 2021. A paper copy of the survey was also mailed to all households in the Napier Street area. The community meeting and online survey were advertised and promoted through the City's project website, mobile signage, Council packages, social media messages, an engagement eNewsletter, and direct mail to homes within the Napier Street area. A total of 16 people attended the virtual public meeting. A total of 20 surveys were completed.

The mitigation measure options were presented to the community to address intersection safety issues at Napier Street/Stegman's Mill Road, travel speed within the immediate Napier Street area and adjacent areas, and traffic infiltration.

Community members provided feedback on elements of the proposed traffic operations and road safety study options. Through this process, the project team heard several key perspectives shared by participants in the virtual public meeting and online survey, including the following:

- ▶ Public meeting participants and survey respondents are eager to improve study area safety.
- ▶ Community members agreed that significant changes need to be made to this study area to improve traffic safety.
- ▶ Participants in the public meeting and online survey reiterated safety concerns about speed, a narrow roadway, through traffic on Napier Street and dangerous intersections.
- ▶ Residents sought clarity on how each mitigation option would impact the wider neighbourhood traffic patterns.
- ▶ Residents who live on Napier Street requested further enforcement of no parking.



- ▶ The influx of tourists and visitors who drive through this neighbourhood on the weekend contributes to resident concerns, especially on Kellam and Napier Streets.

Based upon the survey responses received from the community, the following is noted:

- ▶ 60% responded in support of a partial intersection closure; specifically, the option of a right-in/right-out access (Option 2B) is preferred.
- ▶ 75% of respondents confirmed they lived within the study area, while 25% chose not to disclose their addresses.

Stakeholder Engagement

In consultation with York Region Emergency Services and York Region Traffic Safety, City Fire Services, Road operations, and Environmental Services (waste collection) departments, a partial closure providing a right-in/right-out access is preferred to balance road safety while providing and maintaining access.

Conclusions and Recommendations

Based on the operational and road safety review, the study area roadways serve their intended function within the overall transportation system. Key issues identified include:

- ▶ Lack of available sight distances to perform turning movements safely at the Napier Street/Stegman's Mill Road intersection for the outbound left turn movement;
- ▶ Speeding at noted sections; and
- ▶ Traffic infiltration in combination with the presence of pedestrians, lack of sidewalks, and allowance for on-street parking.

Based on our findings, applicable mitigation measures were considered. The following preferred improvements are recommended to address the identified issues from a road safety perspective.

Sight Distance/Sight Lines

Regarding road safety, community, and stakeholder comments, the recommended preferred option to mitigate the sight distance and sight line deficiencies noted at the Napier Street/Stegman's Mill Road intersection would be a right in/right out access (Option 2B).



Provision of a partial closure facilitated through a physical island to restrict movements to right-in/right-out only while maintaining access for emergency and service vehicles when necessary.

Travel Speed

From a safety perspective, the recommended preferred option to mitigate the noted travel speed issues and low compliance would be a combination of Options 3, 4, 7, 8, and 9. This includes longitudinal and transverse pavement markings, such that motorists have to navigate through a “perceived” narrow road section, lowering the posted speed limit from 50 km/h to 40 km/h for the section of Islington Avenue (north of John Street to Highway 27), and increased signage and the installation of speed boards.

From a safety perspective, to ensure travel speeds along the local streets of Napier Street, John Street, and Kellam Street remain consistent and to protect them from increasing, the recommended preferred mitigation measure would be to designate the residential area as a “40 km/h Neighbourhood Area”.

Traffic Infiltration

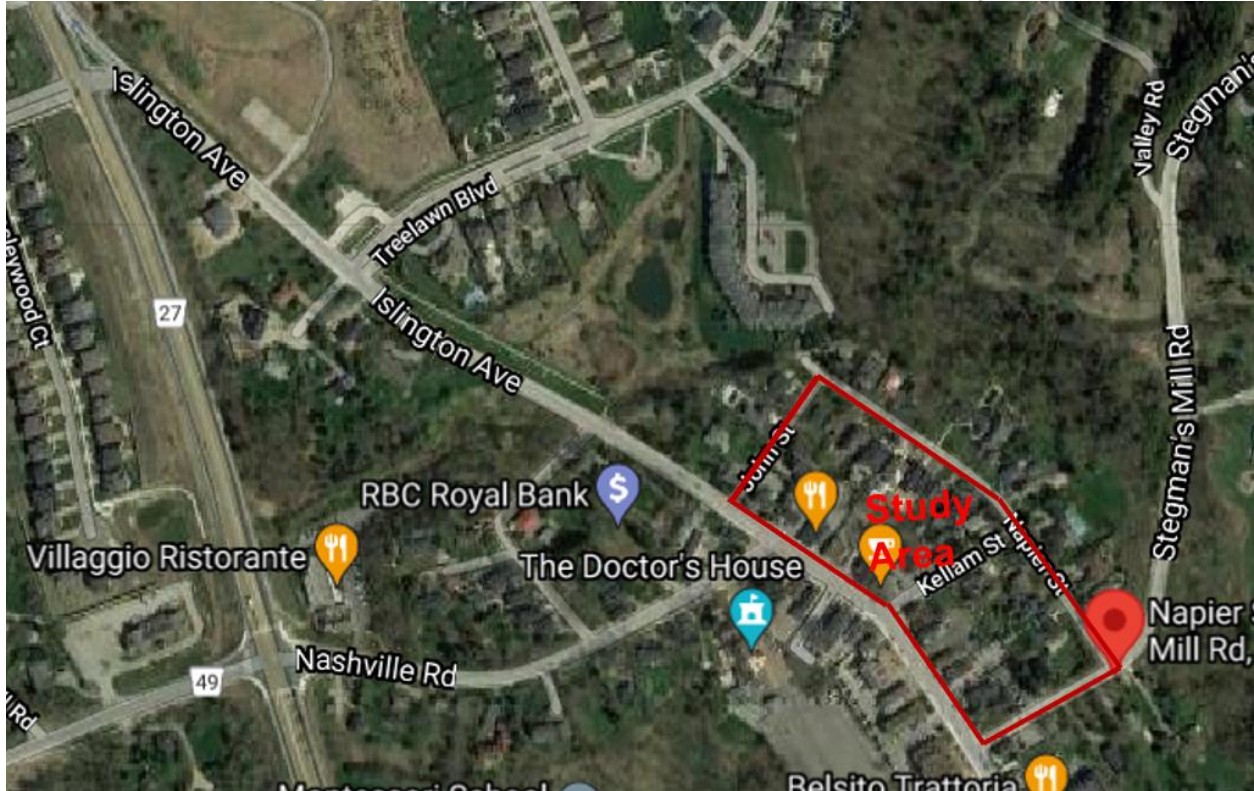
From a safety perspective, to minimize traffic infiltration, the recommended preferred mitigation measure would be to implement a right in/right out access (Option 2B).



Attachment No. 3

Napier Street Area Traffic Operations and Road Safety Study

Public Engagement Executive Summary Report



Prepared by LURA Consulting

February 2022



Executive Summary

The following 'What We Heard Summary' provides an overview of the feedback received by the City of Vaughan and its consultants on the proposed Napier Street Area Traffic Operations and Road Safety Study.

Community members provided feedback on elements of the proposed traffic operations and road safety study options. Through this process, which is elaborated further in the following pages, the project team heard several key perspectives shared by participants in the virtual public meeting and online survey, including the following:

- Though support for the proposed options was mixed, public meeting participants and survey respondents were eager to see the study area safety improved.
- Community members agreed that significant changes need to be made to this study area to improve traffic safety.
- Participants in the public meeting and online survey reiterated safety concerns about speed, a narrow roadway, through traffic on Napier Street and dangerous intersections.
- Residents sought clarity on how each mitigation option would impact the broader neighbourhood traffic patterns.
- Residents who live on Napier Street requested further enforcement of no parking.
- The influx of tourists and visitors who drive through this neighbourhood on the weekend contributes to resident concerns, especially on Kellam and Napier Streets.

Consultation and Engagement Approach

The City of Vaughan engaged community members through a virtual public meeting and an online survey.

Outreach Method	Outreach Activities
Project Webpage	A dedicated webpage – vaughan.ca/NapierStreet – was developed to host all project-related information. Through the webpage, interested residents could also subscribe to receive updates and information about the project, access the survey and public information session material.
Mobile Signage	Mobile signage was erected at Napier Street and Stegman's Mill Road to inform the immediate area about the public information session.
Council Packages	Distributed Council packages for Councillors to share information about the Public Information Session and the survey through their targeted networks.
Social media messages	Distributed content on all City social channels to promote the public information session and the online survey.
Engagement eNewsletter	Promoted the study to a dedicated engagement mailing list.
Surveys Mailed to Home	A copy of the survey was mailed to residents' homes within the study area. Through this, residents could mail back the survey to the City of Vaughan.
Public Meeting Direct Mail	A flyer advertising the public meeting was mailed to 33 homes within the study area.

What we heard

The following section summarizes the key themes from feedback received through the virtual public meeting and the online survey.

Road Closure

Residents expressed equal support and opposition for a full closure of Napier Street on Stegman's Mill Road.

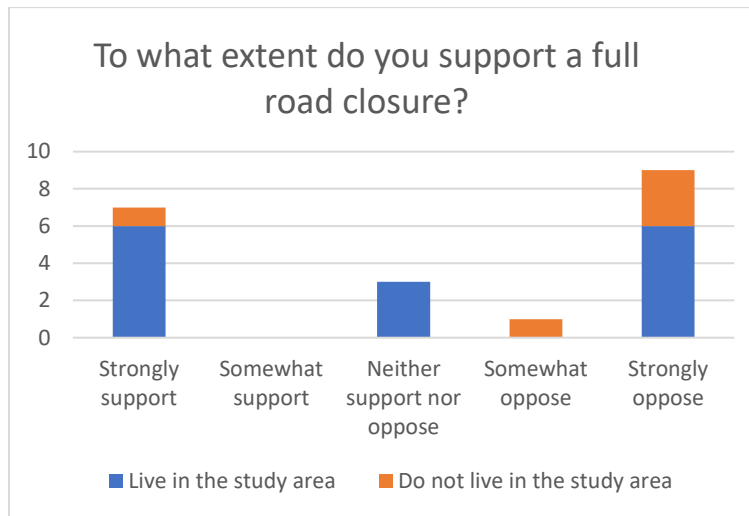


Figure 1. Chart showing support levels for a full road closure

Partial Closure

Option 2a – "3/4" Access Only

Residents generally did not prefer "3/4" access only (left in/right in/right out), which would restrict the outbound left-turn movements from Napier Street. Many participants surveyed either strongly oppose or somewhat oppose introducing a ¾ access option. Residents further suggested that the City investigate the addition of lights and the permitting of right turns only onto Stegman's Mill Road.

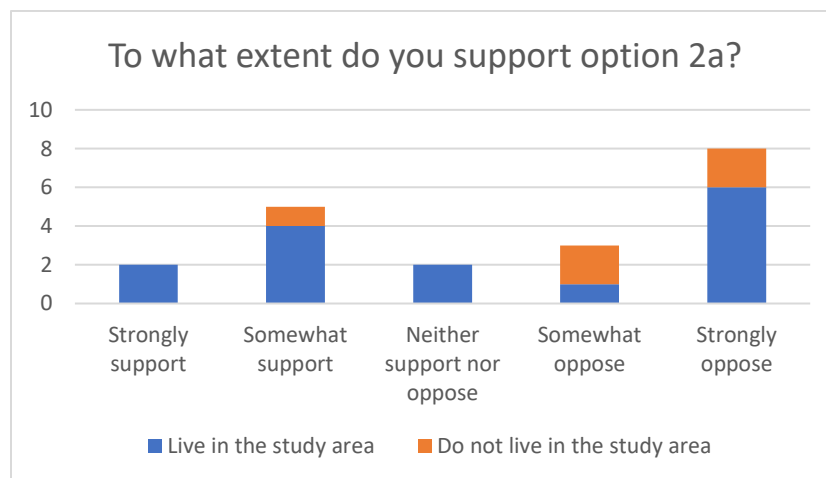


Figure 2. Chart showing support levels for the introduction of a ¾ access option

Option 2b – Right-in/Right-out Only

Survey participants were then asked about Option 2b – to introduce a “right-in/right-out” access that restricts outbound left-turn movements from Napier Street and inbound left-turn movements from Stegman’s Mill Road. Public meeting participants and the survey respondents who live within the study area equally provided support and opposition for a right in/right out option. Further, while some participants noted that this option would be preferable with the addition of a traffic light, other residents did not feel that this option provides enough traffic mitigation.

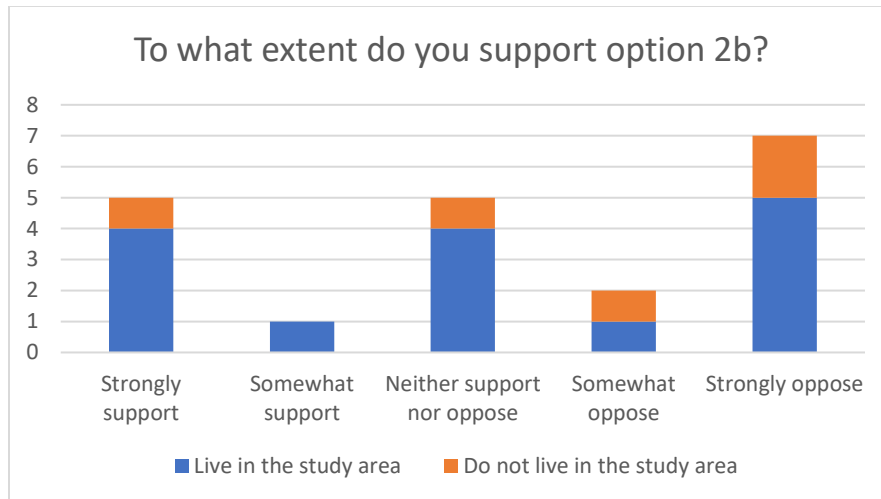


Figure 3. Chart showing support levels for the introduction of a right in/right out access option

Option 2c – Inbound Movements Only

Most survey respondents and public meeting participants were opposed to this option, and only 20% supported it. Among respondents who live in the Napier Street study area, most were opposed.

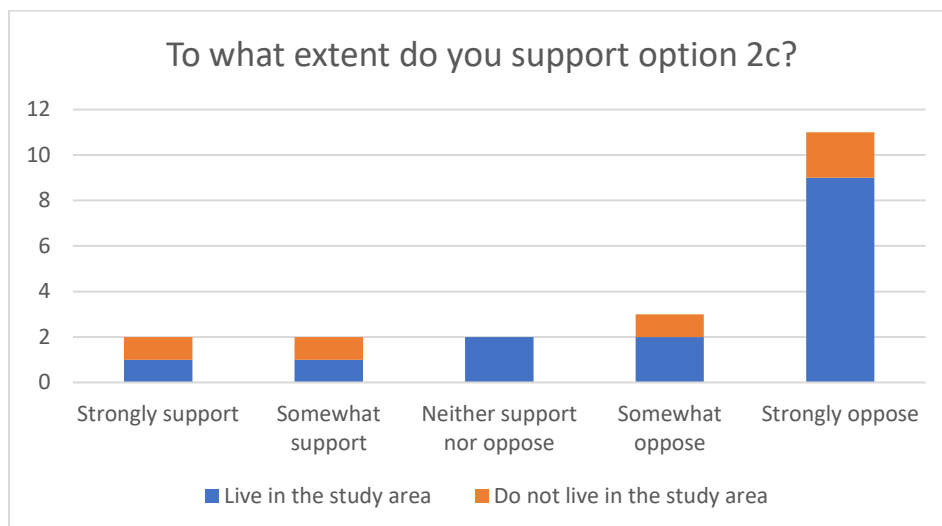


Figure 4. Chart showing support levels for the introduction of a curb bump out

Full or Partial Closure

When survey participants were asked to indicate whether they prefer a full or partial closure, there was a slight preference for partial closure (60%), as shown in the figure below.

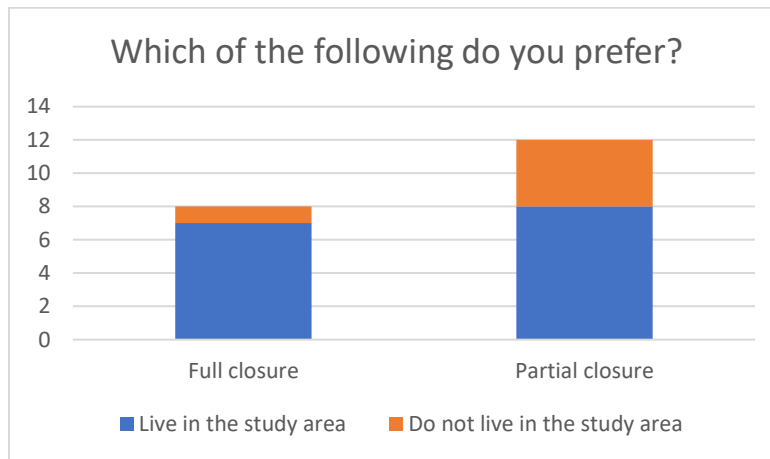


Figure 5. Chart showing support levels for both full closure and partial closure options

Traffic Mitigation

Participants in the online survey showed varying levels of support for the traffic mitigation options, as shown in the figure below. Options 7, 8 and 9 had the highest levels of strong support, and with support for Option 3 and 4 which include:

- **Option 3:** application of pavement markings to influence drivers' perceptions of the roadway environment. It will include the application of longitudinal edge of pavement markings to artificially narrow the roadway and travel lanes.
- **Option 4:** application of pavement markings to influence drivers' perceptions of the roadway environment. Regulatory speed limits will be stenciled on the roadway to increase driver awareness.
- **Option 7:** lowering the posted speed limit on Islington Avenue from 50 km/h to 40 km/h between Highway 27 and Lester B. Pearson Street for consistency with the rest of the corridor.
- **Option 8:** increased signage along the corridor (i.e., slow pedestrians) and installation of speed boards to raise awareness of the environment.
- **Option 9:** designating the residential area as a "Neighborhood Area" per the City's [Speed Limit Policy](#). The speed limit would be set using specialized signage. The entry points to the area would be signed and accompanied by roadway stenciled pavement markings illustrating the regulatory speed limits to increase driver awareness when entering these zones.

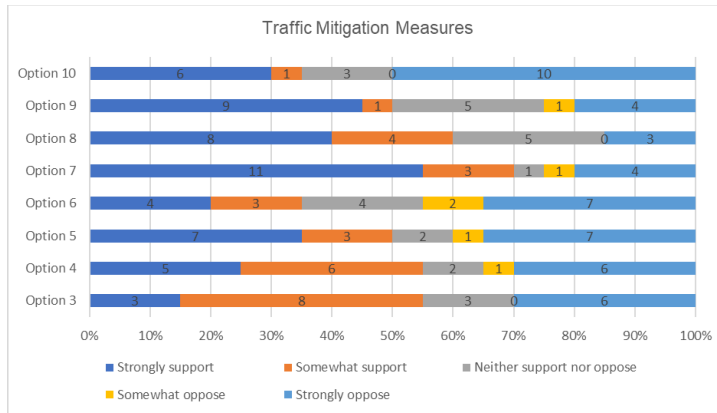


Figure 6. Chart showing support levels for traffic mitigation options

Attachment No. 4

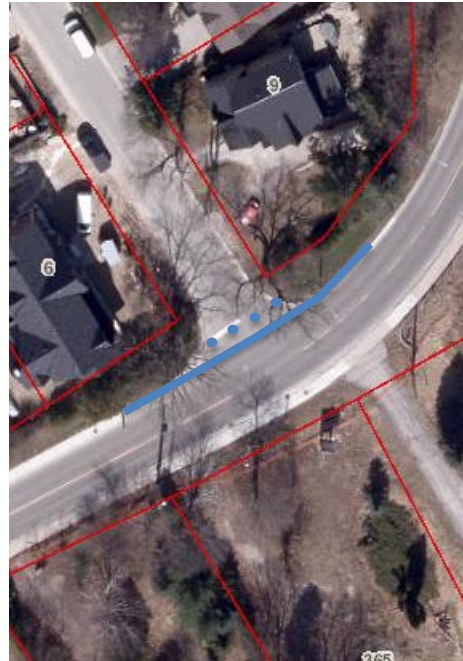
Full Closure Options

Napier Street at Stegman's Mill Road Intersection:



Option #1A:

Feasibility is impacted by spatial and land constraints. Similar impacts with Hamper head configuration



Option #1B:

Impact emergency services, waste collection, and snow plowing due to closure and lack of turnaround space.



Option #1C:

Impacts emergency services, waste collection, and snow plowing. Logistics of operations (e.g. gate access for multiple service providers)

Full Closure Options

	Advantages	Disadvantages
Option #1A Cul-de-Sac	Mitigates the safety issue of poor sight distances Reduces potential traffic infiltration	Not feasible for implementation due to spatial requirements. Restrict access to residents and non-residents alike Not feasible from an operational perspective
Option #1B Dead-End	Mitigates the safety issue of poor sight distances	Waste collection vehicles and snow-plows would have to reverse a 120 metre section. Not feasible from an operational perspective. Creates another safety issue.
	Reduces potential traffic infiltration	Restrict access to residents and non-residents alike
Option #1C Gated Emergency Access Only	Mitigates the safety issue of poor sight distances	Restrict access to residents and non-residents alike
	Reduces potential traffic infiltration	Logistics of operations (i.e., gate access for multiple service providers)
	Retains access for emergency and service vehicles	

Attachment No. 5: Partial Road Closure Options

Napier Street at Stegman's Mill Road Intersection:



Option #2A: Right in/Right out/left in access



Option #2B: Right in/right out access



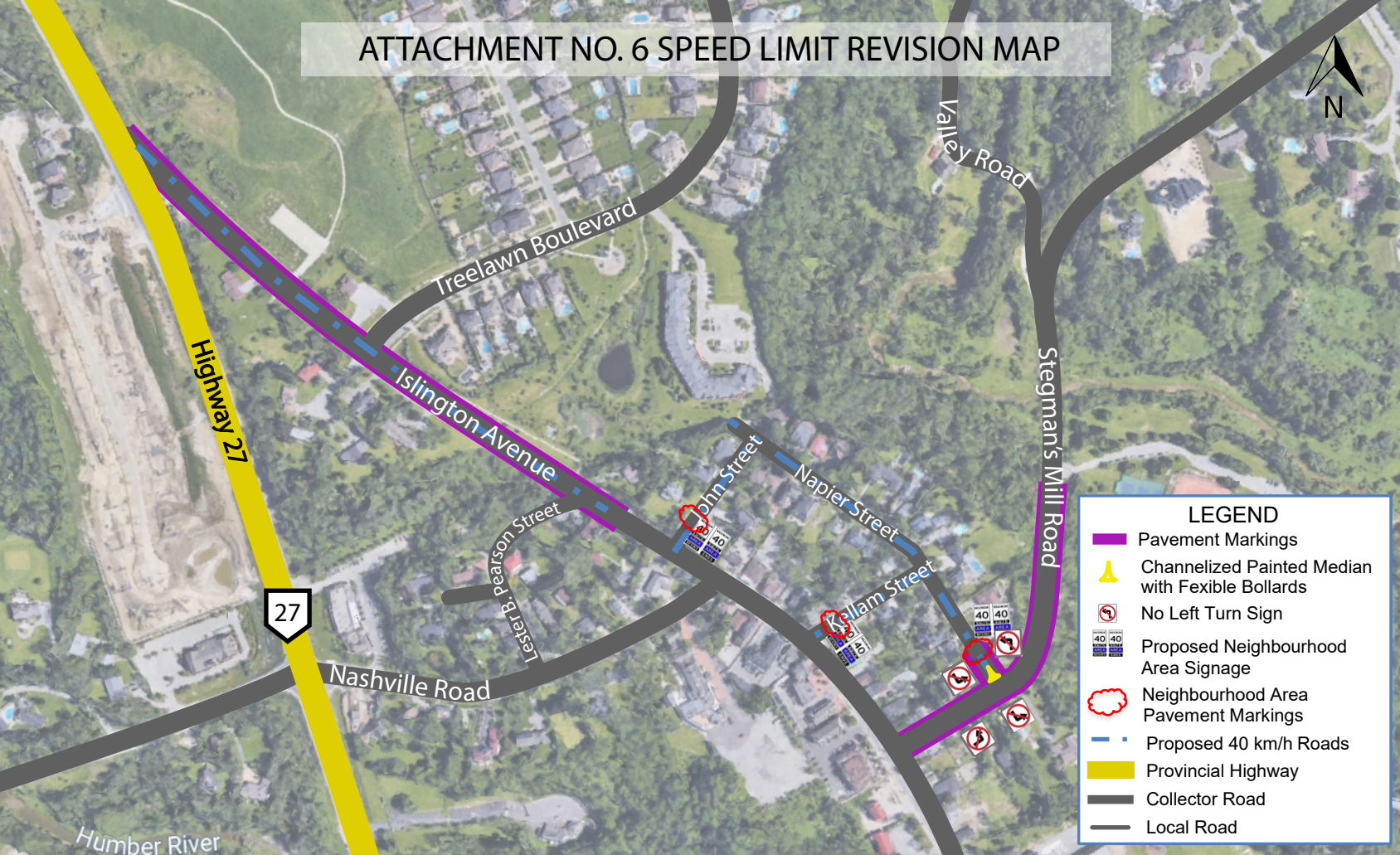
Option #2C: Allow inbound movements only.



Partial Road Closure Options

	Advantages	Disadvantages
Option #2A: Right in/Right out/left in	Improve traffic safety by eliminating the critical left turn movement at the intersection that restricts sightline	Motorists may perform illegal movements, safety issues are present. Safety of right out dependent on adjacent operating speed.
	Reduces potential traffic infiltration Maintain partial access for emergency and service vehicles	Potential to restrict access for residents and non-residents alike.
Option #2B Right-In/Right-Out Access	Improve traffic safety by eliminating the critical left turn movement at the intersection that restricts sightline	Motorists may perform illegal movements, safety issues are present. Safety of right out dependent on adjacent operating speed.
	Reduces potential traffic infiltration Maintain partial access for emergency and service vehicles	Potential to restrict access for residents and non-residents alike.
Option #2C Inbound Only Access	Improve traffic safety by eliminating the critical left turn movement at the intersection that restricts sightline	Restrict access for residents and non-resident alike.
	Reduces potential traffic infiltration	Potential to result in U-turn movements on Napier Street
	Retains partial access for emergency and service vehicles (inbound only)	If illegal movements occur, safety issues are still present. Operational challenge –Waste collection and snowplow will have to reverse

ATTACHMENT NO. 6 SPEED LIMIT REVISION MAP



Attachment No. 7

Napier Street and Stegman's Mill Road Intersection - Interim Measure

