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Date **May 25, 2023** **Report No. 2022-547**

To Chair and Members
Vision Zero Road Safety Committee

From Mark Jacklyn
Director of Operational Services, Public Works Commission

1.0 Type of Report

Consent Item	<input type="checkbox"/>
Item For Consideration	<input checked="" type="checkbox"/>

2.0 Topic Terrace Hill Neighbourhood Traffic Review (Financial Impact – None]

3.0 Recommendation

- A. THAT report no. 2022-547 regarding Terrace Hill Neighbourhood Traffic Review BE RECEIVED; and
- B. THAT the recommended by-law changes as presented in Appendix “A” and further described in report no. 2022-547, Terrace Hill Neighbourhood Traffic Review BE APPROVED; and
- C. THAT a capital project to implement Terrace Hill neighbourhood recommendations BE CONSIDERED in the 2024 capital budget; and
- D. THAT the necessary by-laws BE PRESENTED to City Council for ADOPTION.

4.0 Background

As a result of traffic safety concerns raised by area residents, staff issued a neighbourhood survey on November 15, 2021 to approximately 1,000 residents and businesses in the Terrace Hill neighbourhood, to solicit feedback for staff to

develop a neighbourhood safety review. A copy of the survey is attached as Appendix “B” to this report.

The area targeted for this review was between Terraced Hill Street and Charing Cross Street (north/south) and between West Street and St. Paul Avenue (east/west).

Staff received 101 responses with ideas on how to improve neighbourhood livability and safety within the neighbourhood. Based on the information received and an extensive technical review, staff developed a neighbourhood traffic management plan. The proposed plan was presented to approximately 20 area residents at a Public Information Centre (PIC) on April 26, 2023. A copy of the presentation is attached as Appendix “C” to this report. The proposed changes were generally accepted by residents. Any additional suggestions were reviewed, if possible, included in the final plan noted in the Analysis section of this report.

5.0 Analysis

Staff recommend the following traffic safety measures to address concerns raised by residents.

5.1 Burnley Avenue Recommendations

1. Reduce the posted speed limit between Grandview Street and West Street to 30 km/hour and enhance the existing Playground Area signage.

5.2 Dublin Street Recommendations

1. Enhance existing pedestrian crossing pavement markings, by upgrading the crossing with ladder crosswalks to increase visibility, at the North Park Street, Grand Street, and Sydenham Street intersections.
2. Install a type ‘D’ Pedestrian Crossover (PXO) at Fulton Street to connect the neighbourhood to Connaught Park.
3. Install one (1) set of speed cushions between Dundee Street and North Park Street.
4. Implement consistent Alternate side of street parking throughout the year.
5. Implement No Parking, any time, on the south side, between St. Paul Avenue and Dundee Street.

5.3 Dundas Street Recommendations

1. Enhance existing pedestrian crossing pavement markings, by upgrading the crossing with ladder crosswalks to increase visibility, at the North Park Street intersection.
2. Convert the Intersection Pedestrian Signal (IPS) at Grand Street to an all-way stop.
3. Survey residents to determine support for 2 hour parking and time limit exemption permit parking for residents, between McClure Avenue and North Park Street.
4. Install red flashing beacons above Stop signs at North Park Street intersection.

5.4 Eastbourne Street Recommendations

1. Install all-way stop control at the Dundee Street intersection. This intersection has poor sight lines for vehicles entering the intersection on to Dundee Street.

5.5 Fulton Street Recommendations

1. Implement one-way northbound traffic between Alma Street and Charing Cross Street to eliminate cut through traffic.

5.6 Grand Street Recommendations

1. Reduce the posted speed limit between Dublin Street and Russell Street to 30 km/hour and enhance the existing Playground Area signage.
2. Reduce the speed limit in the designated School Zone to 30 km/hour between Russell Street and Dundas Street.
3. Install a type 'D' PXO on Grand Street at Connaught Park trail.
4. Consider converting existing Intersection Pedestrian Signal at Charing Cross Street to a full traffic control signal
5. Implement Alternate side of street parking, throughout the year, between Charing Cross Street to Alma Street

5.7 Grandview Street Recommendations

1. Reduce the posted speed limit between Sydenham Street and West Street to 30 km/hour and enhance the existing Playground Area signage.

5.8 Kennedy Street Recommendations

1. Install two (2) sets of speed cushions between Sydenham Street and West Street

5.9 North Park Street Recommendations

1. Install all-way stop control at North Park Street and Eastbourne Street. This intersection is heavily utilized by pedestrians, including students accessing Grandview Public School.
2. Enhance existing pedestrian crossing pavement markings, by upgrading the crossing with ladder crosswalks to increase visibility, at the St. George Street intersection.
3. Reduce the speed limit in the designated School Zone to 30 km/hour between Sussex Avenue and Russell Street.
4. Replace the Vehicle Activated Traffic Calming Signs (VATCS) to reflect the new school zone speed limit of 30 km/h.

5.10 Russell Street Recommendations

1. Reduce the posted speed limit between North Park Street and Grand Street to 30 km/hour and enhance the existing Playground Area signage.
2. Install one (1) set of speed cushions, mid-block, between North Park Street and Grand Street.

5.11 St. George Street Recommendations

1. Reduce the speed limit in the designated School Zone to 30 km/hour between North Park Street and Sydenham Street.
2. Enhance existing pedestrian crossing pavement markings, by upgrading the crossing with ladder crosswalks to increase visibility, at the Sydenham Street intersection.

5.12 Sussex Avenue Recommendations

1. Implement one-way westbound traffic only between North Park Street and Dundee Street. The one-way westbound change to the block eliminates any cut through traffic.

5.13 Sydenham Street Recommendations

1. Implement one-way southbound traffic only between Dundas Street and Terrace Hill Street. The one-way southbound change to the block eliminates any cut-through traffic.
2. Install one (1) set of speed cushions between Huff Avenue and Kennedy Street.
3. Install one (1) set of speed cushions around Lilac Court.
4. Extend the corner No Parking zone at Dundas Street to improve access to Sydenham Street.
5. Implement Alternate side of street parking, throughout the year, between Grandview Street and Charing Cross Street.

5.14 Wells Avenue Recommendations

1. Install one (1) set of speed cushions, mid-block, between Dundas Street and Terrace Hill Street.

5.15 Neighbourhood Wide Recommendations

1. As per Public Works-017 Guidelines for Establishing Posted Speed Limits policy, it is recommended that all local roadways within the Terrace Hill Neighbourhood be reduced to 40 km/hour.

The Brantford Fire Department reviewed the neighbourhood traffic plan and suggests that traffic calming options be limited to the following by road classification:

- Arterial – No traffic calming measures
- Collector – Horizontal deflection or horizontal narrowing
- Local – Vertical or horizontal traffic calming measures

The Brantford Fire Department does not support the installation of stop control measures unless specifically warranted by a traffic impact study.

If vertical deflection measures are to be installed, the design and installation of such should be in a manner that causes the least impact to responding emergency vehicles.

Brantford Transit staff also reviewed the neighbourhood traffic plan and noted that measures included in section 5.9 for North Park Street would have an impact on Brantford Transit services. Although it is recognized that the recommendations provide benefits in terms of traffic safety, the measures can have negative impacts on transit services. Reduced speeds and increased frequency or duration of stops impacts their ability to maintain adequate schedule adherence or on time performance, this in turn affects the quality of service provided to transit users.

6.0 Financial Implications

The work to be completed in 2023 will be funded from the Operational Services operating budget, at an estimated cost of \$13,500. A summary of the costs are outlined below:

- \$1,000 parking control changes on Dublin Street
- \$1,000 parking control change on Grand Street
- \$1,000 parking control changes on Sydenham Street
- \$2,000 Eastbourne Street at Dundee Street all-way stop
- \$2,000 North Park Street at Eastbourne Street all-way stop
- \$3,000 red flashing beacons Dundas Street at North Park Street

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- \$500 Burnley Street Playground Zone speed limit reduction
 - \$500 Grand Street School Zone speed limit reduction
 - \$500 Grand Street Playground Zone speed limit reduction
 - \$500 North Park Street School Zone speed limit reduction
 - \$500 Russell Street Playground Zone speed limit reduction
 - \$500 St. George Street School Zone speed limit reduction
 - \$500 Grandview Street Playground Zone speed limit reduction

Staff will submit a capital project for consideration as part of the 2024 capital budget deliberations, at an estimated cost of \$83,500. A summary of the costs are outlined below:

- \$10,000 Area Speed Limit signs (40 km/h)
- \$24,000 Vehicle Activated Traffic Calming Signs (VATCS)
- \$1,000 one-way section of Sussex Avenue
- \$1,000 one-way section of Sydenham Street
- \$1,000 one-way section of Fulton Street
- \$1,000 Dublin Street enhanced crosswalks
- \$5,000 Dublin Street at Fulton Street PXO
- \$5,000 Grand Street at Connaught Park trail PXO
- \$2,000 convert IPS to all-way stop Dundas St. at Grand St.
- \$10,000 two (2) sets of speed cushions on Kennedy Street
- \$10,000 install two (2) sets of speed cushions on Sydenham Street
- \$5,000 install set of speed cushions on Wells Avenue
- \$5,000 set of speed cushions on Dublin Street

In 2024, Operational Services will also submit for Capital Budget consideration, the conversion of the Intersection Pedestrian Signal (IPS) at Charing Cross Street and Grand Street to a full traffic control signal, in the estimated amount of \$120,000.

It is important to note that enhancements, such as those noted in this report, will have a future impact on maintenance costs associated with signs, traffic signals and pavement markings.

7.0 Climate and Environmental Implications

The construction activities of traffic control and calming measures will temporarily increase greenhouse gas (GHG) emissions but since the construction variables are unknown at this time, GHG emissions cannot be quantified. However, traffic calming measures will overall reduce vehicle emissions since decreased speed leads to fewer GHG emissions. Additionally, traffic control and calming measures create a safer environment for walking and cycling which encourages active transportation as well as improves the local air quality.

8.0 Conclusion

The recommended traffic safety measures, address many of the resident concerns, and create a safer neighbourhood environment, that promotes active and healthy living for all road users.



Mark Jacklyn
Director of Operational Services, Public Works Commission

Prepared By:
Rob Smith, C.E.T., Supervisor of Transportation Services

Attachments

Appendix "A" – Terrace Hill Neighbourhood By-Law Amendments

Appendix "B" – Terrace Hill Neighbourhood Survey

Appendix "C" – Terrace Hill Neighbourhood presentation

In adopting this report, is a by-law or agreement required? If so, it should be referenced in the recommendation section.

By-law required ☒ yes ☐ no

Agreement(s) or other documents to be signed by Mayor and/or City Clerk ☐ yes ☒ no

Is the necessary by-law or agreement being sent concurrently to Council? ☒ yes ☐ no

Appendix “A”

Dublin Street

- a) RECOMMEND that Schedule “16” of Traffic By-law 37-83 which pertains to “Pedestrian Crossovers” BE AMENDED to provide the following:

<u>STREET</u>	<u>LOCATION</u>
Dublin Street	At the east side of the intersection with Fulton Street

- b) RECOMMEND that Schedule “7” of Parking By-law 144-88 which pertains to “Parking Prohibited at Anytime” BE AMENDED to provide the following:

<u>NAME OF STREET</u>	<u>SIDE OF STREET</u>	<u>LOCATION WHERE PARKING IS PROHIBITED</u>
Dublin Street	South	From Fulton Street to Grand Street
Dublin Street	South	From St. Paul Avenue to Dundee Street (west intersection)

- c) RECOMMEND that Schedule “9” of Parking By-law 144-88 which pertains to “Parking Prohibited During Certain Time” BE REPEALED as follows:

<u>NAME OF STREET</u>	<u>SIDE OF STREET</u>	<u>LOCATION</u>	<u>TIMES WHEN PARKING IS PROHIBITED</u>
Dublin Street By-law 147-2011	South	From Fulton Street to Grand Street	December 1 to March 31 Every Day

- d) RECOMMEND that Schedule “12” of Parking By-law 144-88 which pertains to “Alternate Side of Street Parking” BE AMENDED to provide the following:

<u>NAME OF STREET</u>	<u>LOCATION</u>	No parking from 12 noon, 1st day of each month until 9 pm, 15th day of each month, everyday	No Parking from 12 noon, 16th day of each month until 9 pm, last day of each month, everyday
Dublin Street	From Dundee Street (west intersection) to Fulton Street	North	South
Dublin Street	From Grand Street to Sydenham Street	North	South

- e) RECOMMEND that Schedule “14” of Parking By-law 144-88 which pertains to “Alternate Side of Street Parking” BE REPEALED as follows:

<u>NAME OF STREET</u>	<u>LOCATION</u>	No parking from 12 noon, 1st day of each month until 9 pm, 15th day of each month, everyday, December 1st through March 15	No parking from 12 noon, 16th day of each month until 9 pm, last day of each month, everyday, December 16th through March 31
Dublin Street By-law 147-2011	From North Park Street to Fulton Street	North	South
Dublin Street By-law 147-2011	From Grand Street to Sydenham Street	North	South

Dundas Street

- a) RECOMMEND that Schedule “1” of Traffic By-law 37-83 which pertains to “Through Highways” BE REPEALED as follows:

<u>THROUGH STREET</u>	<u>LIMITS</u>
Dundas Street By-law 179-92	From the east side of North Park Street to the west side of Clarence Street.

- b) RECOMMEND that Schedule “1” of Traffic By-law 37-83 which pertains to “Through Highways” BE AMENDED to provide the following:

<u>THROUGH STREET</u>	<u>LIMITS</u>
Dundas Street	From the east side of North Park Street to the west side of Grand Street.
Dundas Street	From the east side of Grand Street to the west side of Clarence Street.

- c) RECOMMEND that Schedule “3” of Traffic By-law 37-83 which pertains to “Traffic Control Signals” BE REPEALED as follows:

INTERSECTION LOCATION

IPS	Dundas Street at Grand Street By-law 61-2005
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Eastbourne Street

- a) RECOMMEND that Schedule “1” of Traffic By-law 37-83 which pertains to “Through Highways” BE REPEALED as follows:

<u>THROUGH STREET</u>	<u>LIMITS</u>
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Eastbourne Avenue	From east side of St. Paul Avenue to the west side of North Park Street.
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Fulton Street

- a) RECOMMEND that Schedule “6” of Traffic By-law 37-83 which pertains to “One-way Streets” BE AMENDED to provide the following:

<u>COLUMN 1</u>	<u>COLUMN 2</u>	<u>COLUMN 3</u>	<u>COLUMN 4</u>
Fulton Street	From Alma Street to Charing Cross Street	At all times Every Day	Northerly

Grand Street

- a) RECOMMEND that Schedule “12” of Parking By-law 144-88 which pertains to “Alternate Side of Street Parking” BE AMENDED to provide the following:

<u>NAME OF STREET</u>	<u>LOCATION</u>	No parking from 12 noon, 1st day of each month until 9 pm, 15th day of each month, everyday	No Parking from 12 noon, 16th day of each month until 9 pm, last day of each month, everyday
Grand Street	From Charing Cross Street to Alma Street	East	West

- b) RECOMMEND that Schedule “16” of Traffic By-law 37-83 which pertains to “Pedestrian Crossovers” BE AMENDED to provide the following:

<u>STREET</u>	<u>LOCATION</u>
Grand Street	72 metres north of Russell Street, at Connaught Park trail

North Park Street

- a) RECOMMEND that Schedule “1” of Traffic By-law 37-83 which pertains to “Through Highways” BE REPEALED as follows:

<u>THROUGH STREET</u>	<u>LIMITS</u>
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North Park Street By-law 179-92	From the north side of St. George Street to the south side of Dublin Street.
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- b) RECOMMEND that Schedule “1” of Traffic By-law 37-83 which pertains to “Through Highways” BE AMENDED to provide the following:

<u>THROUGH STREET</u>	<u>LIMITS</u>
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North Park Street	From the north side of St. George Street to the south side of Eastbourne Street.
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Sussex Avenue

- a) RECOMMEND that Schedule “6” of Traffic By-law 37-83 which pertains to “One-way Streets” BE AMENDED to provide the following:

<u>COLUMN 1</u>	<u>COLUMN 2</u>	<u>COLUMN 3</u>	<u>COLUMN 4</u>
Sussex Avenue	From North Park Street to Dundee Street	At all times Every Day	Westerly

Sydenham Street

- a) RECOMMEND that Schedule “6” of Traffic By-law 37-83 which pertains to “One-way Streets” BE AMENDED to provide the following:

<u>COLUMN 1</u>	<u>COLUMN 2</u>	<u>COLUMN 3</u>	<u>COLUMN 4</u>
Sydenham Street	From Dundas Street to Terrace Hill Street	At all times Every Day	Southerly

- b) RECOMMEND that Schedule “7” of Parking By-law 144-88 which pertains to “Parking Prohibited at Anytime” BE AMENDED to provide the following:

<u>NAME OF STREET</u>	<u>SIDE OF STREET</u>	<u>LOCATION WHERE PARKING IS PROHIBITED</u>
Sydenham Street	West	From Dundas Street to a point 25 metres north of the centre line of Dundas Street

- c) RECOMMEND that Schedule “12” of Parking By-law 144-88 which pertains to “Alternate Side of Street Parking” BE AMENDED to provide the following:

<u>NAME OF STREET</u>	<u>LOCATION</u>	No parking from 12 noon, 1st day of each month until 9 pm, 15th day of each month, <u>everyday</u>	No Parking from 12 noon, 16th day of each month until 9 pm, last day of each month, <u>everyday</u>
Sydenham Street	From Grandview Street to Charing Cross Street, except as further restricted in Schedule "7".	East	West

- d) RECOMMEND that Schedule "14" of Parking By-law 144-88 which pertains to "Alternate Side of Street Parking" BE REPEALED as follows:

<u>NAME OF STREET</u>	<u>LOCATION</u>	No parking from 12 noon, 1st day of each month until 9 pm, 15th day of each month, <u>everyday</u> , December 1st through <u>March 15</u>	No parking from 12 noon, 16th day of each month until 9 pm, last day of each month, <u>everyday</u> , December 16th through <u>March 31</u>
Sydenham Street By-law 105-2021	From Princess Street to Dublin Street, except as further restricted in Schedules '10' & '16' herein.	East	West
Sydenham Street By-law 105-2021	From a point 45 metres north of the centre line of Dublin Street to Charing Cross Street.	East	West

Terrace Hill Area Speed Limit

- a) RECOMMEND that Schedule "8" of Traffic By-law 37-83 which pertains to "Speed Regulations" BE REPEALED as follows:

<u>COLUMN 1</u>	<u>COLUMN 2</u>	<u>COLUMN 3</u>
Burnley Avenue By-law 40-2018	From West Street to Grandview Street	40 km/hour
Grand Street By-law 62-95	From Dundas Street to Dublin Street	40 km/hour
North Park Street By-law 40-2018	From Dundas Street to Waddington Street	40 km/hour

North Park Street From Waddington Street to Memorial Drive 40 km/hour
By-law 102-2020

- b) RECOMMEND that Schedule “8” of Traffic By-law 37-83 which pertains to “Speed Regulations” BE AMENDED to provide the following:

<u>COLUMN 1</u>	<u>COLUMN 2</u>	<u>COLUMN 3</u>
Alma Street	From Fulton Street to Sydenham Street	40 km/hour
Borden Avenue	From King George Road to St. Paul Avenue	40 km/hour
Burnley Avenue	From Grandview Street to West Street	30 km/hour
Dublin Street	From St. Paul Avenue to Sydenham Street	40 km/hour
Dundas Street	From St. Paul Avenue to High Street	40 km/hour
Dundas Street East	From High Street to West Street	40 km/hour
Dundee Street	From Melrose Street to Dublin Street	40 km/hour
Dundee Street	From Dublin Street to Sussex Avenue	40 km/hour
Eastbourne Street	From St. Paul Avenue to North Park Street	40 km/hour
Fulton Street	From Charing Cross Street to the southerly end of Fulton Street	40 km/hour
Grand Street	From Charing Cross Street to Dublin Street	40 km/hour
Grand Street	From Dublin Street to Dundas Street	30 km/hour
Grand Street	From Dundas Street to Terrace Hill Street	40 km/hour
Grandview Street	From Sydenham Street to West Street	30 km/hour

High Street	From Princess Street to Terrace Hill Street	40 km/hour
House Avenue	From St. George Street to Dundas Street	40 km/hour
Ilona Court	From Sydenham Street to the easterly end of Ilona Court	40 km/hour
Kennedy Street	From Sydenham Street to West Street	40 km/hour
Lilac Court	From Sydenham Street to the easterly end of Lilac Court	40 km/hour
McClure Avenue	From Dundas Street to Terrace Hill Street	40 km/hour
Melrose Street	From St. Paul Avenue to the easterly end of Melrose Street	40 km/hour
Newcastle Street	From Sydenham Street to the westerly end of Newcastle Street	40 km/hour
North Park Street	From Memorial Drive to Sussex Avenue	40 km/hour
North Park Street	From Sussex Avenue to Russell Street	30 km/hour
North Park Street	From Russell Street to Dundas Street	40 km/hour
Owen Avenue	From North Park Street to the easterly end of Owen Avenue	40 km/hour
Princess Street	From Sydenham Street to High Street	40 km/hour
Russell Street	From North Park Street to Grand Street	30 km/hour
St. George Street	From St. Paul Avenue to North Park Street	40 km/hour
St. George Street	From North Park Street to Sydenham Street	30 km/hour

St. Paul Avenue	From Charing Cross Street to King George Road	40 km/hour
St. Paul Avenue	From St. Paul Avenue to Dublin Street	40 km/hour
Sussex Avenue	From St. Paul Avenue to North Park Street	40 km/hour
Sydenham Street	From Charing Cross Street to Terrace Hill Street	40 km/hour
Terrace Hill Street	From Wells Avenue to West Street	40 km/hour
Wells Avenue	From Dundas Street to Terrace Hill Street	40 km/hour
Wesley Avenue	From Huff Avenue to the southerly end of Wesley Avenue	40 km/hour

Appendix "B"



November 15, 2021

Terrace Hill - Traffic Calming Neighbourhood Opinion Survey
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Dear Residents,

As a result of a request to Public Works, staff is considering a review of traffic operations in the Terrace Hill neighbourhood between the boundaries of Terrace Hill Street to Charing Cross Street and from West Street to St. Paul Avenue. For this process to be successful, it requires participation from the residents in the affected neighbourhood. The results of this survey will determine whether the review process will continue.

Once the City has received your response, the results of the survey will be summarized. If the majority of residents in the affected neighbourhood support the review of traffic operations and development of a neighbourhood traffic management plan, a public meeting will be scheduled through the Ward 3 Councillors, to allow residents to identify their traffic concerns and assist staff in developing a neighbourhood traffic calming solution. If the majority of the affected residents do not support the installation of traffic calming measures, the project will not continue.

Traffic calming is the implementation of physical and passive measures that enhances traffic safety on residential streets for all users. Some examples of traffic calming are speed humps, curb extensions, pavement markings and flexible bollards, directional closures, regulatory restrictions, etc.

Please provide feedback regarding this proposal, including the street you reside on, by Friday, December 3, 2021 to Rob Smith, C.E.T., Transportation Technologist, directly at 519-759-4150 Ext. 5683 or E-mail at rsmith@brantford.ca. All feedback received will be reported to your Ward 3 Councillors for a decision on this proposal.

Yours truly,

A handwritten signature in black ink, appearing to read "Dave Ferguson".

Dave Ferguson, C.E.T.,
Manager of Traffic Services

CC: Councillor D. McCreary
Councillor G. Martin
B. Hutchings, CAO
I. Hans, P. Eng., PMP, General Manager, Public Works Commission
M. Jacklyn, Director of Operational Services