Date: May 14, 2019  
Report No.: 2019-259

To: Chair and Members  
Committee of the Whole – Operations and Administration

From: E. (Beth) Goodger, General Manager  
Public Works Commission

1.0 Type of Report
   Consent Item [X]  
   Item For Consideration []

2.0 Topic: North Park Street – Road Diet Update [Financial Update – None]

3.0 Recommendation
   A. THAT Report 2019-259 North Park Street – Road Diet Update BE RECEIVED.

4.0 Purpose and Overview
   To provide City Council with an update on the North Park Street road diet and construction project. A road diet, to add designated lanes for bicycles, was implemented in 2018 during the reconstruction of North Park Street. In addition during this project that speed limit was reduced and parking controls were modified to accommodate the changes. The final design is being updated based on community input as outlined in this report and will be put in place this summer.

5.0 Background
   North Park Street, between Dundas Street and Morton Avenue, was reconstructed in 2016 and 2017. The work consisted of storm and sanitary
sewers and water main replacement; and road reconstruction, including replacement of curbs and sidewalk. North Park Street is identified as a cycling corridor in the Transportation Master Plan; therefore the road construction project was an opportune time to implement designated bicycle lanes.

A public meeting was held on Thursday, November 23, 2017. Comments received from residents suggested that the posted speed limit on North Park Street be reduced to 40 km/h, and that the proposed designated lanes for bicycles be extended northerly beyond the construction limits at Morton Avenue to provide a connection to the Wayne Gretzky Sports Centre.

At its meeting March 27, 2018, City Council approved the recommendations of Report No. PW2018-021 North Park Street: Traffic and Parking Bylaw Amendments for Road Diet. The report recommendations pertaining to North Park Street are summarized as follows:

- A posted speed limit of 40 km/h from Dundas Street to Waddington Street
- Designated lanes for bicycles in both directions between St. George Street and Waddington Street
- Parking control amendments to accommodate the designated lanes for bicycles

Line painting was completed in April 2018. The current pavement markings generally consist of the following:

- Two (2) 3.5 metres wide vehicle travel lanes
- Two (2) 1.6 metres wide bicycle lanes
- One (1) 2.5 metres wide parking lane
- One (1) 0.9 metre wide buffer between the bicycle lane and parking lane

Comments and data continued to be received and reviewed after implementation of the bicycle lanes. A second public meeting was held March 21, 2019 to provide an update on the project and gather feedback. Comments received are provided in detail in the Input from Other Sources section of this report.

6.0 Corporate Policy Context

The following long term desired outcome from the Strategic Plan is addressed with the recommendation:

Brantford will be supported by well-developed and maintained transportation and servicing infrastructure.
The addition of bicycle lanes on North Park Street supports the Safe Brantford Strategy and conforms to the long-term desired outcomes identified under Goal #2 - High Quality of Life and Caring for all citizens in that Brantford will be recognized as a safe and healthy community – one that promotes and enables the well-being of its citizens, and supports access of all citizens to a full range of health and community services.

The 2014 Transportation Master Plan Update (TMP) included an Active Transportation section to enhance forms of active transportation in the City such as cycling and walking, including upgrades to existing transportation routes. North Park Street, from Dundas Street to Memorial Drive, is identified in the TMP as a cycling corridor to connect north end neighbourhoods to Terrace Hill via Memorial Drive and North Park Street. The TMP recommends adding bike lanes as part of road reconfiguration from four to three lanes, within the first five years of the plan, to complete this portion of the City’s bike lane network.

In July 2018, Council adopted Vision Zero for Road Safety for the City of Brantford with an aim to make Brantford streets safer through improved education, enforcement, engineering, evaluation and engagement. The changes on North Park Street support Council’s goal of ZERO fatalities or serious injuries on roadways that was adopted in July 2018.

### 7.0 Input From Other Sources

The first public meeting was held Thursday, November 23, 2017. Comments received at this meeting were implemented for the first application of pavement markings on North Park Street, notably extending the bicycle lanes from Morton Avenue to Waddington Street. Collection of feedback after implementation resulted in additional improvements that were presented to the public at the second public meeting.

A second public meeting was held on March 21, 2019 to share before and after results of the road diet and for residents and road users to provide input on the proposed pavement marking revisions ahead of final paving. Comments received at the meeting, and throughout the project have resulted in pavement marking revisions to be completed following the application of the final lift of asphalt later this summer. The changes are discussed in the analysis section of this report.

Both positive and negative feedback has been received. Comments varied depending on the user. Generally negative response was received from through-drivers. Some concerns were also received from transit regarding vehicle driver behaviour that led to delays for transit vehicles. Generally more positive feedback was received from local residents. Positive feedback was also received from school crossing guards and the cycling community.
Responses from forty-three (43) residents were received, twenty-seven (27) supported the road diet pavement markings, and sixteen (16) opposed the current configuration.

The twenty-seven (27) residents supporting the road diet pavement markings outlined the following positive impacts summarized as follows:

- Increased safety - safer for pedestrians and cyclists. Many people are using the bicycle lanes. The dedicated bicycle lanes help cyclists feel safe and they encourage active transportation.
- Pedestrian friendly – there has been an increase in pedestrians walking on the sidewalks. Residents now feel safe to walk on the sidewalks. There are two schools on this road which makes it safer for children. Also safer for the children crossing at the intersections. Makes it much safer for anyone on bikes and people walking where there are no boulevards. Residents feel much safer cutting their lawn and shoveling snow having a parking lane next to the sidewalk and not a speeding car. New lane markings have stopped cars from parking across the road from the school and parents allowing their children to cross in the middle of the street
- Reduced speeds – The bicycle lanes and one lane of traffic have reduced the speeding on the street. Love the 40 km/h speed limit. The change has slowed the traffic. It has slowed down traffic and it is much safer to exit our driveway.
- Bicycle lanes - Bicycle lanes should continue right down to Fairview Drive. It is a good introduction to having the city implement more bike lanes! Makes it much safer for anyone on bikes and people walking where as there are no boulevards

The sixteen (16) residents opposing the road diet pavement markings provided comments as summarized below:

- Pavement Markings / Driver Confusion – concern regarding the section between Waddington Street and Fairview Drive. It’s a very abrupt transformation for changing lanes. Drivers do not use the left lane going south anymore, backing traffic up in the curb lane. The lane markings back and forth are confusing, and often ignored by vehicles continuing in straight lines. Confusion and congestion at Charing Cross Street.
- Visibility of pavement markings – Cannot see road lines when it rains, snows, or at night. The snow plow did not remove enough snow to see lines. Need overhead signage to advise of turn lanes and through lanes as snow covers pavement markings. The section between Charing Cross Street and Fairview Drive is more confusing with the lane changing, especially in the winter when the snow is covering the lines on the road. It’s difficult to see the lines on rainy nights. Parking on both sides of the road is not well marked. In winter and wet weather any road marking can’t
be seen so the drivers think they are driving on a straight street when the
markings are all over the place.
- Cyclists - Many on bicycles are still riding on the sidewalks. Suggest
removing the sidewalk on one side of the street and pave a multi-use trail.
- Speeding - No speed enforcement; vehicles are still going 70-80 km/h on
a regular basis. Many cars are still speeding and often don’t stop at the
stop sign at Dublin Street. If speeding is an isolated issue, fix it.
- Unnecessary - Don’t feel it’s necessary to have a bike trail going down
North Park Street. The cars are year-round, bikes are only summer and
fall. The bike lanes are hardly used. They start and end and go nowhere.
The bike lanes go nowhere and the left turn lanes are just bottlenecks on
this street.
- Capacity – Disagree with changing a four lane road to a two lane road.
The population is increasing yet you’re taking away traffic lanes. It doesn’t
make any sense. North Park Street is a major city artery and should be
designed like others such as West Street., St. Paul Avenue, and Fairview
Drive. Relocate the bicycle lanes and remove parking lanes because
people living on North Park Street have driveways to park off-street.
- Inappropriate actions - Cars are parked on the east side where it is signed
No Parking, forcing vehicles to go into the oncoming lane. Cars also drive
down the parking lane and thus are beside you when you want to turn
right at all-way stop.
- Inconvenience – Resident has to drive around the block to back in to
driveway and people are honking their car horns. Difficulty backing out
driveway turning left, at time it’s a long wait. Traffic is sometimes backed
up past our house. People are honking their horn because we always
back into our driveway. Cars now back up past my property not allowing
me easy access to my driveway if I need to cross from the opposite side of
road
- Noise – The increase in noise in my house is excessive due to idling
cars/trucks that then accelerate away from a stop.
- On-street parking - Cars that park on the street has greatly increased.
Have witnessed children dart out between vehicles and almost get hit by a
car because of reduced visibility
- Posted Speed – 40 km/h speed limit is ridiculous for a main thoroughfare

Section 8.4 of this report provides staff response to the comments gathered during the
second public meeting and proposed changes to address concerns raised.

8.0 Analysis

The “road diet” was implemented on North Park Street to improve safety of the
road by reducing speeding and provide cycling facilities as identified in the
Transportation Master Plan.
The following changes were implemented in 2018:

- Reduced vehicle travel lanes from 2 lanes to 1 lane per direction
- Provided dedicated left-turn lanes at key locations
- Added dedicated bicycle lanes
- Supplied dedicated on-street parking spaces
- Lowered the posted speed limit from 50 km/h to 40 km/h
- Installed radar feedback signs (to be replaced with Vehicle Activated Traffic Calming signs (VATCS) in 2019)

8.1 Safety Considerations

Studies indicate that one third of all fatal automobile collisions involve drivers who were speeding. Speeding comes in only second to alcohol as the top factor in vehicular fatalities. In a Pedestrian Death Review, Sept 2012, the Office of the Chief Coroner for Ontario concluded “…the fatality risk at 50km/hr being more than twice as high as the risk at 40 km/hr” The pedestrian fatality risk as a function or the impact speed of a car is illustrated in Figure 1.

Figure 1 - Pedestrian Fatality Risk

Reducing the posted speed limit alone is typically ineffective at reducing the operating speed on a roadway; it requires corresponding changes to the road design. Designated lanes for bicycles narrows the vehicular travel lanes and is conducive to reduce speeding.

8.2 Before and After Results
The traffic volume on North Park Street before and after the road diet has remained consistent. The average annual daily traffic volume (AADT) on North Park Street north of Charing Cross Street is 9,000 vehicles and south of Charing Cross Street is 6,100 vehicles. It can be concluded that little to no traffic has diverted to other parallel streets. There has been no significant impact; the traffic volume is within available lane capacity. A peak hour traffic volume comparison is illustrated in Figure 2.

Figure 2 - Peak Hour Volume Comparison

The bike lanes add a cycling corridor to connect north end neighbourhoods to Terrace Hill via Memorial Drive and North Park Street, and support the City of Brantford’s desire to promote increased multi-modal usage of transportation corridors, as identified in the City of Brantford Transportation Master Plan. Cyclist activity has increased on North Park Street following the addition of bicycle lanes. Before construction, three (3) cyclists were observed on a typical weekday evening, and none were observed on a Saturday morning. After the bicycle lanes were painted, seventeen (17) cyclists were observed on a weekday evening and ten (10) on a Saturday morning. The cycling volume is illustrated in Figure 3. Over 70% of cyclists are using the bicycle lanes, with some observed
to ride on the sidewalk. The high percentage of cyclists using the bicycle lanes over sidewalks far surpasses typical expectations based on similar configurations from other municipalities and suggests the lanes are well received by cyclists.

Figure 3 - North Park Street - Cycling Volume

8.3 Effect on Speeding

Reduction in speed limit alone is typically ineffective, and requires corresponding changes to the road design. After the road diet pavement markings, the percentage of vehicles travelling at or less than 40 km/h increased from 3% to 18%, which is a significant improvement. The North Park Street speed profile is illustrated in Figure 4. The speed data was collected prior to the installation of the radar feedback signs (RFS), therefore the speed reduction is expected to be better than stated above.
The current road design is most effective on “unintentional speeders”. It is less effective on “willful speeders”; therefore there is still room for improvement. This can be aided by radar feedback signs, vehicle activated traffic calming signs, and speed limit enforcement.

8.4 Response to Feedback

In response to feedback received throughout the project, the following revisions to the pavement markings will be completed following the final lift of asphalt to be applied later this summer:

- The southbound right turn lane at St. George Street will be lengthened and additional pavement markings and signs provided (Figure 5)
- Longer tapers where the vehicle and bicycle lanes shift over to accommodate on-street parking for smoother transition (Figure 6)
- Additional left turn arrows north of Waddington Street to provide advance warning to drivers that they must be in the curb lane to continue travelling south (Figure 7)
• Reposition the buffer between the vehicle lane and bicycle lane, instead of between the Parking lane and the bicycle lane, to provide more space between different modes of transportation (Figure 8).
• Vehicle Activated Traffic Calming Signs (VATCS) installed north and south of Grandview Public School.
Figure 5 - North Park Street at St. George Street Improvements

Reconfigure right-turn lane at St. George to improve lane comprehension and improve functionality of intersection

Proposed Pavement Marking Layout

Existing Pavement Marking Layout
Figure 6 - North Park Street - Lengthened Tapers

Increase the length of the taper from 30m to 40m to improve lane comprehension and provide smoother transition for motorists and cyclists.

Proposed Pavement Marking Layout

Existing Pavement Marking Layout
Additional pavement markings to be installed to improve lane comprehension and provide additional notifications of lane configuration change.

**Proposed Pavement Marking Layout**

**Existing Pavement Marking Layout**
The following provides a response to negative comments received:

- Pavement Markings / Driver Confusion – the pavement marking revisions noted above will address many of the concerns received.
- Visibility of pavement markings – pavement markings are difficult to see on any street when it rains or when the road surface is partially snow covered. In inclement weather motorists should adjust their driving accordingly.
- Cyclists - The majority of cyclists observed are riding within the designated bicycle lanes.
- Speeding – studies indicated that the operating speed on North Park Street has reduced following the implementation of bicycle lanes
- Unnecessary - Cycling network improvements are needed throughout the city, as identified in the Transportation Master Plan.
- Capacity – the population increase in the city has little to no impact to the traffic volume on North Park Street since more of the new development is in the south west. Traffic volumes before and after the implementation of bicycle lanes has remained consistent, and is within the capacity of a single travel lane.
- Inappropriate actions – illegal parking activity before and after bell times in front of Grandview Public School has decreased since the bicycle lanes were painted. Lane marking changes at the intersection of St. George Street will define a southbound right turn lane.
- Inconvenience – driveway access at may be difficult at peak times.
- Noise – There is the same traffic volume on North Park Street as there was before bicycle lanes
- Posted Speed – North Park Street is a major collector road, it is not an arterial road. A 40 km/h speed limit on a collector road is appropriate.

### 8.5 Next Steps

The next steps of the project will be:
- Prepare final pavement marking design
- Complete paving this year
- Install revised pavement markings
- Install permanent vehicle activated traffic calming signs (VATCS)
- Continue monitoring

### 9.0 Financial Implications

There are no financial implications to Operational Services operating budget resulting from the recommendation of this report. The remaining road surfacing and pavement markings will be completed as part of the North Park Street Capital Project (RD1517).

This project is partially funded by the Ontario Municipal Commuter Cycling (OMCC) Program. The City of Brantford received $717,757.00 to fund a portion
of 9 cycling projects identified in the 2014 TMP, including the Active Transportation Portion of the TMP Update currently underway. North Park Street between Dundas Street and Morton Avenue was one of the projects identified for these funds and $52,000 from the OMCC grant was allocated to the project. If the cycle lanes are removed, the project would no longer be eligible for the $52,000 in OMCC funds and the money would need to be returned to the province, unless a proposal to reallocate funds to another Council approved cycling project is accepted by the Ministry of Transportation and implemented prior to December 31st, 2020.

10.0 Conclusion

The designated bicycle lanes on North Park Street between St. George Street and Waddington Street contribute to the reduction of speeding and add 3 km of cycling lanes to the City’s active transportation network.

Overall, the changes have increased safety on North Park Street. The design was tested throughout 2018 and has been revised based on community input. The final design as outlined in this report will be installed after the final lift of ashphalt is installed in summer 2019.
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 [X] no

Agreement(s) or other documents to be signed by Mayor and/or City Clerk [ ] yes [X] no

Is the necessary by-law or agreement being sent concurrently to Council? [ ] yes [X] no