Report
Staff Report
The Corporation of the City of Brampton
2020-09-30

Date: 2020-09-28

Subject: 2020 Road Resurfacing Program

Secondary Title: Active Transportation Provisions in the 2020 Road Resurfacing Program – All Wards (HF.x)

Contact: Nelson Cadete, Project Manager, Active Transportation, Planning, Building and Economic Development Department

Report Number: Public Works & Engineering-2020-191

Recommendations:

THAT the report from Nelson Cadete, Project Manager, Active Transportation, Transportation Planning, dated September 24, 2020, to the Council meeting of September 30, 2020, re: **Active Transportation Provisions within the 2020 Road Resurfacing Program - All Wards (HF.x)** be received

Overview:

- **In April of this year, City Council directed staff to apply an active transportation lens, to all new road construction and future road infrastructure capital projects wherever it is possible within the geographical space available within a road construction project.**
- **Staff takes a collaborative and proactive approach between Planning and Public Works staff to consider well in advance the AT needs to be incorporated into planned capital projects and programs.**
- **For Council's information, a table summarizing the AT provisions included in the 2020 annual resurfacing program is provided that compares the feedback received from the cycling advocacy to the recommendations of the ATMP, and provides an explanation for any roads that are not considered as candidates for active transportation improvements through the road resurfacing program.**

Background:

Further to the City's 2040 Vision for a safe, integrated transportation network emphasizing walking, cycling, and transit, Council directed staff in April of this year "*to apply an Active Transportation lens, as set out in the Active Transportation Master Plan, to all new road construction and future road infrastructure capital projects; and wherever it is possible within the geographical space available within a road construction project, the City endeavour to accommodate Active Transportation initiatives to facilitate an integrated and connected system for the improved health of all Brampton residents*." - *April 29, 2020, C142-2020*.

A staff report entitled *Implementation of Active Transportation Infrastructure within the City Road Rights-of-way* was included as an information item on the agenda of the August 5, 2020 Council meeting. This report outlined the collaborative and proactive approach between Planning and Public Works staff to coordinate well in advance the AT needs to be incorporated into planned capital projects and programs. The August 5, 2020 report is attached as Appendix A.

At its meeting of September 16, 2020, Council endorsed the proposed active transportation projects incorporated into the 2020 Road Resurfacing program, and directed staff to report back to the September 30, 2020 meeting of Council with regard to the potential inclusion of active transportation infrastructure for the following roads:

- Meadowland Gate
- Balmoral Drive east of Bramalea Road
- Haggert Avenue North
- Railroad Street

Through subsequent discussions with Council, staff was also requested to consider feedback from citizen advocates from the cycling community and to review it against staff's planned active transportation projects within the 2020 Road Resurfacing Program.

Current Situation:

One of the key implementation strategies outlined in the Active Transportation Master Plan (ATMP) is to incorporate cycling and walking infrastructure into planned construction opportunities (i.e., capital road projects, road resurfacing program). This report is addressing active transportation facility implementation opportunities through the City's annual road resurfacing program, and specifically in regards to the 2020 program.

A table summarizing the AT provisions included in the 2020 annual resurfacing program is provided as Appendix B. The table also compares the feedback received from the cycling advocacy to the recommendations of the ATMP, and provides an explanation for any roads that are not considered as candidates for active transportation improvements through the road resurfacing program.

The inclusion of active transportation provisions in planned construction opportunities such as the 2020 Road Resurfacing Program is one of a number of implementation strategies outlined by the ATMP. Implementation of active transportation infrastructure through the road resurfacing program is the most cost-effective approach, though it does limit the types of cycling infrastructure that can be applied to a specific roadway given the scope of the road resurfacing program. The road resurfacing program includes a number of maintenance activities (curb/sidewalk replacement, replacement of asphalt road surface) which extend the life cycle of the road without changing its geometrics. Therefore, the introduction of a bike lane within the existing width of a road can easily be accommodated into a road resurfacing project with pavement markings and traffic signs. However, the construction of a boulevard path or the relocation of a curb to widen a roadway to accommodate bike lanes would require a detailed design (to assess impacts on utilities and drainage) as well as a review of maintenance issues and extends beyond the scope of the resurfacing program.

Due to operating characteristics, the ATMP recommends multi-use paths as the appropriate cycling facility for both Clark Boulevard (Rutherford Road to Dixie Road) and Rutherford Road (south of Queen Street). The suggested facility types identified within the ATMP are derived by applying a facility selection tool (based on provincial guidelines) which uses the following roadway operating characteristics:

- operating speed
- vehicle volume
- pedestrian volumes
- function of the roadway (arterial road, collector road, local road)

Appendix C attached is an excerpt from the ATMP that illustrates a generalized Cycling Facility Selection Tool. It is important to note that any decisions made respecting facility type must be further refined through a more detailed contextual evaluation (because every road is different). From the facility selection tool we can identify that separated facility types such as multi-use paths or cycle tracks are appropriate for roadways with an arterial classification and daily vehicle volumes exceeding 10K, such as the subject section of Clark Boulevard (22.6K – 2018) and Rutherford Road (21.7K – 2015).

The selection facility tool was also applied to support our decisions to not implement formal cycling facilities on local streets. Local streets with daily vehicle volumes less than 3K do not require dedicated space (bicycle lane/urban shoulder). Further, Table

4.7 from the Ontario Traffic Manual Book 18 Cycling Facilities (Appendix D) includes suggested minimum widths for conventional bike lanes. The suggested minimum width for a uni-directional bike lane is 1.5 metres (total three metre requirement – one lane/direction). When applying this standard to the City's 8.0 metre wide local streets, only five metres remain available for two vehicle lanes. For local roadways that have been identified in the ATMP as important network links or identified by the cycling community, staff will accommodate either sharrows or a modified urban shoulder.

North Park Drive

With North Park Drive (Dixie Road to Bramalea Road) being resurfaced this summer as a part of a regular maintenance cycle, staff assessed the current operational characteristics of the roadway (vehicle speed, volume, etc.) with the ATMP and Vision Zero framework in mind. The traffic data revealed operating speeds were higher than expected when compared to similar roadways.

North Park Drive from Williams Parkway to Bramalea Road is identified in the City's ATMP as a candidate for cycling infrastructure and the recommended facility type is a protected bike lane. In addition to accommodating people on bikes, the bike lanes will also calm traffic by placing North Park Drive on a "road diet". In this case, the road diet involves replacing the four car lanes with two through car lanes, leaving the remaining portion of roadway for other purposes such as bike lanes and a buffer (where possible) between the bike lanes and car lanes. Road diets reduce vehicle speeds, collisions and cut-through traffic, making the road safer for vehicles, pedestrians and cyclists. An increase in traffic safety and slower vehicle speeds has already been noted on the portion of North Park Drive between Dixie Road and Williams Parkway that was put on a road diet earlier this summer.

A request was made by Council to review the potential of installing a multi-use path (MUP) facility in the boulevard of North Park Drive. Even though this road has the boulevard space to install a MUP, it is not recommended for the following reasons:

- Line painting has already taken place on North Park Drive from Dixie Road to Williams Parkway as noted above; to remove those would incur additional cost and would require the road to be resurfaced as the lane markings visible even after grinding would create driver confusion.

- Line painting on North Park Drive where the resurfacing has been completed has already been pre-marked. It is recommended that the line painting in this segment take place as soon as possible to avoid safety concerns.

- Putting priority on the car over that of other sustainable modes of transportation is contrary to our Brampton 2040 Vision and the ATMP.

- The placement of the MUP would use valuable green space in the right of way that we are trying to maintain as part of our Complete Streets initiative and recently approved CEERP, the six CEERP priority projects and the establishment of the Centre for Community Energy Transformation.

- The MUP in the boulevard would have winter maintenance impacts. The snow clearing from the road would be placed on the boulevard so the MUP would not be cleared to the same service level as the road. A bike lane on the road would have the same service level.

- Review from the biking advocacy groups show a strong preference for on road bike facilities versus MUP's.

- The installation of a MUP would have to be considered as a capital project for 2021 at a cost of approximately $1M for the full length of North Park Drive from Bramalea to Dixie.

Balmoral Drive

Balmoral Drive from Bramlea Road to Torbram Road is identified with the ATMP as a candidate for cycling infrastructure and the recommended type of cycling facility is a bike lane. Balmoral Drive is an existing four lane collector road that could also benefit from a road diet. Staff will include the consideration of bike lanes along Balmoral Drive into the 2021 ATMP implementation work plan.

Main Street South

Similar to North Park Drive, Main Street South is a location where excessive vehicle speeds have been recorded. In order to assist with improving safety for all road users, staff are recommending that Main Street South between Nanwood Drive and Wellington Street be reduced from four car lanes to two car lanes with the addition of bike lanes and a shared centre turn lane. These changes to the roadway in conjunction with the newly introduced Community Safety Zone and future implementation of Automated Speed Enforcement will reduce vehicle speeds and collisions along this section.

These initiatives align with the Council Priority "Streets for People" that incorporates the Vision Zero framework in transportation planning, design and operations to prevent fatal and serious injury from motor vehicle collisions in the City right-of-way. Also, the City

Council endorsed Vision Zero framework recognizes that safety for all road users is prioritized over speed, convenience or cost.

Implications of pausing the 2020 Road Resurfacing Program

Prior to the pause in work (September 16, 2020), staff had anticipated that 13 streets from the 2020 Road Resurfacing Program would be deferred to 2021 as a result of project delays (COVID-19) and the end of the construction season. This estimate was based on the contractor's most recent project schedule (August 31, 2020).

With the current pause in resurfacing work, an additional 21 streets could potentially be deferred to next year. The table below provides a summary of the streets that are currently under construction, those that were originally anticipated to be deferred and the new 21 locations that are planned to be carried over to next construction season.

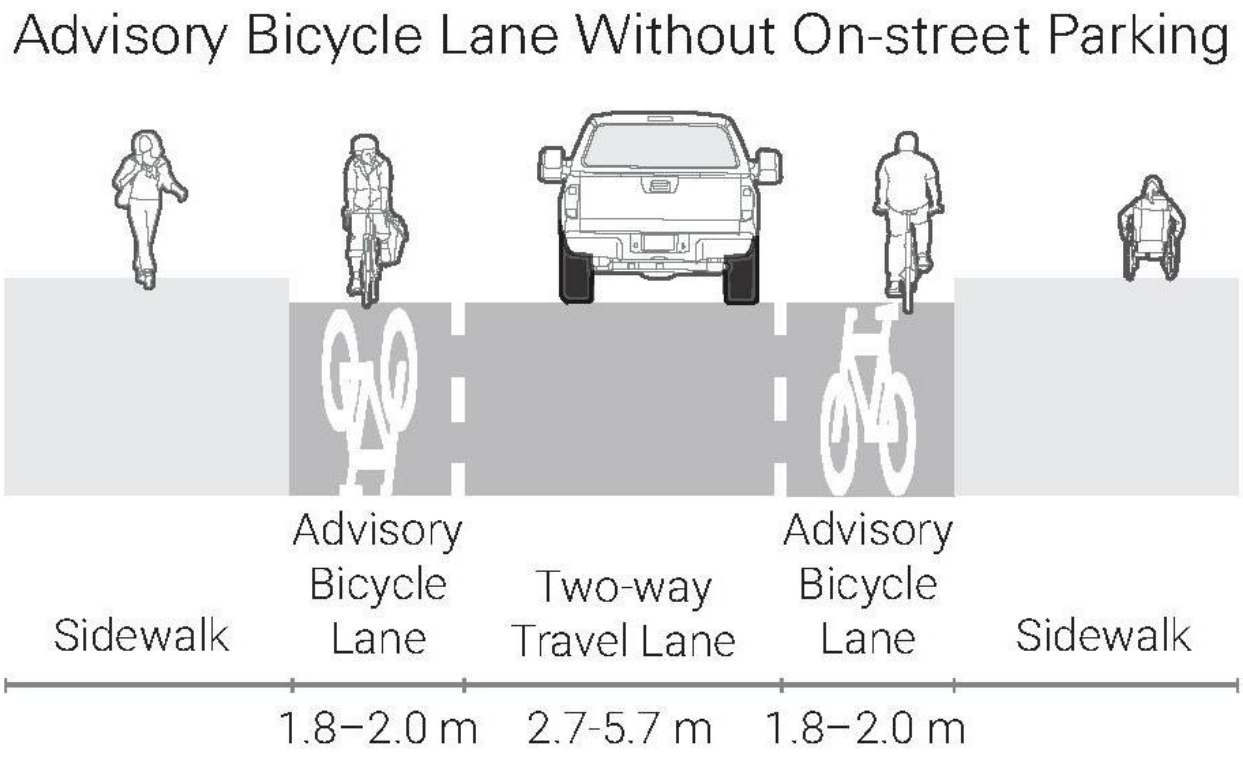
Staff continue discussions with the contractor to see if there are any streets that can be started and finished this construction year. Upon confirmation, staff will reach out to staff at the Region of Peel in order to ensure that any impacts to their work are captured.

Streets Under Construction	**Project Carry Over – Prior to Pause**	**Potential Carry Over – Due to the Pause**
1. Nelson Street (Ward 1)	1. Sundridge Street (Ward 2)	1. Charles Street (Ward 1)
2. Haggert Avenue (Ward 1)	2. Bay Crest Drive (Ward 2)	2. Townsend Gate (Ward 1)
3. Railroad Street (Ward 1)	3. Daisy Court (Ward 2)	3. Harper Road (Ward 3)
4. Centre Street (Ward 1)	4. Chambers Court (Ward 2)	4. Biscayne Crescent (Ward 3)
5. Conestoga Drive (Ward 2)	5. Robertson Davies Drive (Ward 2)	5. Dean Street (Ward 3)
6. Meadowland Gate (Ward 3)	6. Twin Willow Crescent (Ward 2)	6. Clipper Court (Ward 3)
7. Main Street South (Ward 3)	7. Melrose Garden (Ward 2)	7. Basildon Crescent (Ward 7)
8. Brisdale Drive (Ward 6)	8. Terra Cotta Crescent (Ward 3)	8. Ashwood Crescent (Ward 7)
9. Central Park Drive (Ward 7)	9. Watson Crescent (Ward 3)	9. Bishop Court (Ward 7)
10. North Park Drive (Ward 7)	10. Chatsworth Drive (Ward 5)	10. Greenhills Square (Ward 8)
11. Maitland Street (Ward 7)	11. Grange Drive (Ward 5)	11. Fidelia Court (Ward 8)
	12. Peter Robertson Boulevard (Ward 8)	12. Esplanade Road (Ward 8)
	13. Sunny Meadow Boulevard (Ward 8)	13. Earlton Court (Ward 8)
		14. Elrose Road (Ward 8)
		15. Eldon Court (Ward 8)
		16. Jennifer Square (Ward 8)
		17. Deerhurst Drive (Ward 8)
		18. Grasspoint Square (Ward 8)
		19. Wentworth Court (Ward 8)
		20. Josephine Court (Ward 8)
		21. Gateway Boulevard (Ward 8)

Staff were provided notice from the contractor on September 19, 2020 that a delay claim would be forthcoming. The claim has now been received and is currently under review.

Advisory Bicycle Lanes

Advisory Bicycle Lanes are a facility type that has been suggested by our cycling advocates for use along the local narrow roads identified in the resurfacing program. Advisory bicycle lanes are a shared roadway facility that delineate space on a narrow roadway for cycling with dashed outer lane lines. The roadway contains no centreline, and motor vehicles share the centre roadway space for two-way travel. The centre travel lane width is narrower than two conventional travel lanes and may be as narrow as a single travel lane. Motor vehicles yield to oncoming traffic by pulling into the advisory bicycle lane. If a cyclist is present, motorists are to slow and yield to the cyclist prior to entering the advisory bicycle lane. Motorists must always yield to people riding bikes and overtake with caution. The diagram below illustrates the layout of a typical advisory lane layout (without on-street parking).



Advisory bicycle lanes are most appropriate on streets where motor vehicle traffic volumes are low (< 4,000 ADT), operating speeds are low (30 to 50 km/h), trucks are restricted or very infrequent, and the road geometry is straight, level and without sightline obstructions. They work best when it is rare for two opposing motor vehicles to meet at the same time that a cyclist is in the vicinity.

Although there may be candidates for advisory bike lanes in the City, their endorsement for use by the province is still under consideration and their effectiveness is still unknown and being tested. As a part of the update to the guidelines respecting bicycle facilities (Ontario Traffic Manual Book 18: Cycling Facilities), the province is currently considering the use of advisory bike lanes.

Zebra Markings

Through their review of the program, the community cycling advocates suggested that the use of enhanced pavement markings ('zebra' or 'ladder' markings) be applied to pedestrian crossings at intersections along the local streets where formal bike lanes are not recommended. The City has a policy for the introduction of enhanced pedestrian crossings at intersections. The following guidelines are used to determine the appropriate locations for ladder stripe crosswalks in Brampton:

- Crossings controlled by a traffic signal or a stop sign
- Pedestrian crossing volumes are high
- Right or left turn vehicle volumes are high
- Higher than expected number of pedestrian collisions

Parking Restrictions, Bike Lanes and Urban Shoulders

Vehicles are prohibited from parking in designated bike lanes (which are identified by pavement markings – white line and bicycle symbol – and signage). In response to current parking demand along some two-lane collector roads within residential areas, the City has implemented urban shoulders. An urban shoulder resembles a typical bike lane, however there are no pavement markings (bike symbols) or signage to designate it as an exclusive bike lane, and parking is permitted. While a dedicated cycle lane is the preferred application, urban shoulders can be considered an interim measure to accommodate cyclists on local collector roads where previously there was no such facility, while still providing for current on-street parking. Urban shoulders can be "upgraded" to a dedicated cycling facility with no other physical changes than the addition of painted bike symbols and signage.

Adelaide - Richmond Cycle Tracks

One of the facility types being recommended by community cycling advocates (through their review of this program) is a cycle track (protected bike lanes) similar to the one installed along Adelaide Street and Richmond Street in the City of Toronto. Cycle tracks are separated from the adjacent vehicular lane by some form of physical barrier (eg., curbs, bollards, planter boxes, etc.). This facility type is applied along roads with higher vehicle volumes and speeds, where the barrier separation provides for a bicycle lane more comfortable for more cyclists of all ages and abilities. The City's East-West Cycling Corridor is an example where the existing volumes and speeds along Vodden Street and Howden Boulevard warrant the need for a higher order cycling facility, and a cycle track is the ultimate design. Elsewhere in Brampton, cycle tracks are to be

implemented on Hurontario Street, south of Steeles Avenue and on The Gore Road between Castlemore Road and Queen Street East. The ATMP cycling network also recommends other potential locations for cycle tracks.

Corporate Implications:

Financial Implications:

The two week pause on the 2020 Road Resurfacing program will result in a delay claim from the contractor. A claim has been submitted and is under review from staff. There may also be additional financial impacts that will depend on how many additional roads will be deferred until 2021.

Term of Council Priorities:

This report supports the Term of Council priority for a Green City as it demonstrates the City's commitment to sustainability by improving active transportation opportunities.

Conclusion:

The annual road resurfacing program provides an ideal opportunity to apply an active transportation lens to planned projects. This is a recommended implementation approach within the ATMP and a part of a 'Complete Streets' approach to designing and enhancing road corridors for all users.

Planning and Public Works staff take a collaborative and proactive approach to consider well in advance the AT needs to be incorporated into planned capital road projects and programs.

Staff will be preparing an annual report to be delivered in the first quarter of each year, summarizing the scope of active transportation elements implemented in the preceding year, and outlining the proposed program for the coming year. This will provide an opportunity to engage the cycling advocates (through the Brampton Cycling Advisory Committee) and to advise the community of changes coming to City roads prior to the beginning of construction. Staff have started work on the ATMP implementation work plan for 2021 which includes the consideration of 67 km of bike lanes, paths or trails. The 2021 work plan will be presented to Council and the advisory committee to solicit feedback.

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Attachments:

Appendix A: Staff Report - Implementation of Active Transportation Infrastructure within the City Road Rights-of-way
Appendix B: Summary Table – Active Transportation Provisions in 2020 Road Resurfacing Program
Appendix C: Brampton ATMP Cycling Facility Selection Tool
Appendix D: Bike Lane Widths from OTM Book 18: Cycling Facilities