

**Minutes – Standing Policy Committee on Infrastructure Renewal and Public Works –
April 21, 2020**

REPORTS

**Item No. 8 Safer Cycling and Pedestrian Connection – Bridgwater Lakes and
Bridgwater Trails
(Waverley West Ward)**

STANDING COMMITTEE DECISION:

The Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Winnipeg Public Service and received the report as information.

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DECISION MAKING HISTORY:

Moved by Councillor Sharma,

That the recommendation of the Winnipeg Public Service be concurred in.

Carried

David Grant submitted a communication dated April 20, 2020, with respect to the matter.

STANDING COMMITTEE RECOMMENDATION:

On March 3, 2020, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its April 7, 2020 meeting for the Winnipeg Public Service to report back on the matter.

On November 19, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its March 3, 2020 meeting for the Winnipeg Public Service to report back on the matter.

On May 28, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted an extension of time to its November 19, 2019 meeting for the Winnipeg Public Service to report back on the matter.

On November 20, 2018, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Riel Community Committee and directed the Winnipeg Public Service to report back within 180 days on recommendations, associated costs and an estimated timeline to construct an improved and safer cycling and pedestrian connection between the two transportation corridors from the neighbourhoods of Bridgwater Lakes and Bridgwater Trails, which cross Bison Drive between Appleford Gate and Bridge Lake Drive..

COMMUNITY COMMITTEE RECOMMENDATION:

On September 28, 2018, the Riel Community Committee passed the following motion:

WHEREAS the main pedestrian and cycling connection from the neighbourhoods of Bridgwater Lakes and Bridgwater Trails crosses Bison Drive between Appleford Gate and Bridge Lake Drive;

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DECISION MAKING HISTORY (continued):

COMMUNITY COMMITTEE RECOMMENDATION (continued):

AND WHEREAS the connection of these two transportation corridors passes over two lanes of roadway and through a drainage ditch;

AND WHEREAS there is a permanent desire line through the ditch indicating extensive pedestrian and cycling use;

AND WHEREAS both these corridors connect major public recreation amenities and lead to the newly announced \$30M recreation fitness facility;

THEREFORE BE IT RESOLVED THAT the Standing Policy Committee on Infrastructure Renewal and Public Works direct the Winnipeg Public Service to study and provide recommendations, associated costs and an estimated timeline to construct an improved and safer cycling and pedestrian connection between the two transportation corridors from the neighbourhoods of Bridgwater Lakes and Bridgwater Trails, which crosses Bison Drive between Appleford Gate and Bridge Lake Drive.

ADMINISTRATIVE REPORT

Title: Safer Cycling and Pedestrian Connection – Bridgwater Lakes and Bridgwater Trails

Critical Path: Standing Policy Committee on Infrastructure Renewal and Public Works

AUTHORIZATION

Author	Department Head	CFO	CAO
D. Patman, P. Eng.	J. Berezowsky	N/A	M. Ruta, Interim CAO

EXECUTIVE SUMMARY

A review of the crossing control at the location on Bison Drive between Bridge Lake Drive and Appleford Gate indicated that the location is not currently warranted for pedestrian crossing control. However, there is a basis to install a controlled crossing founded on future growth in demand, latent demand, system connectivity, and encouraging mode choices other than vehicle travel for short trips.

The proposed crossing control is a Rectangular Rapid Flashing Beacon (RRFB) treatment system, which has recently been approved by the Province of Manitoba. The RRFB crossing will be placed on the priority list for installation through the Traffic Engineering Improvement Program (TEIP) subject to available budget and City-wide priorities. At the time of this report, the public service estimates the cost of this project to be \$35,000 for a solar-powered beacon on a four-lane roadway with a median and an annual maintenance cost of approximately \$3,750.

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

On November 20, 2018, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Riel Community Committee and directed the Winnipeg Public Service to report back within 180 days on recommendations, associated costs and an estimated timeline to construct an improved and safer cycling and pedestrian connection between the two transportation corridors from the neighbourhoods of Bridgwater Lakes and Bridgwater Trails, which crosses Bison Drive between Appleford Gate and Bridge Lake Drive.

Subsequent extensions were provided by the Standing Policy Committee.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications to receiving this report as information.

HISTORY/DISCUSSION

BACKGROUND INFORMATION

On November 20, 2018, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Riel Community Committee and directed the Winnipeg Public Service to report back within 180 days on recommendations, associated costs and an estimated timeline to construct an improved and safer cycling and pedestrian connection between the two transportation corridors from the neighbourhoods of Bridgwater Lakes and Bridgwater Trails, which crosses Bison Drive between Appleford Gate and Bridge Lake Drive. Reasons stated for the request included:

- The main pedestrian and cycling connection from the neighbourhoods of Bridgwater Lakes and Bridgwater Trails crosses Bison Drive between Appleford Gate and Bridge Lake Drive.
- The connection of these two transportation corridors passes over two lanes of roadway and through a drainage ditch.
- There is a permanent desire line through the ditch indicating extensive pedestrian and cycling use.
- Both corridors connect major public recreation amenities and lead to the newly announced \$30M recreation fitness facility.

TRAFFIC CHARACTERISTICS

The study area and proposed controlled crossing location for pedestrians and cyclists on Bison Drive is illustrated in Figure 1 and Photos 1, 2, and 3 (below). Bison Drive, within the study area, is an east-west collector street and snow route that runs through the centre of Waverley West between Kenaston Boulevard Northbound to the east and Appleford Gate to the west. Parking is not permitted on Bison Drive. The proposed crossing location on Bison Drive is located approximately 125 metres west of a roundabout intersection at Bridge Lake Drive and 250 metres east of a roundabout intersection at Appleford Gate. The crossing location would service an existing multi-use path that currently runs through the Bridgwater Lakes and Bridgwater Trails neighbourhoods as illustrated in Figure 1, as well as the multi-use path that currently runs along the south side of Bison Drive. It is important to note that while there are currently paths leading to the crossing location, there is no crossing surface in place, and as a result, people who currently cross at this location must negotiate the curbs (there are no curb ramps) and the grassed ditch in the median.

The section of Bison Drive where the proposed crossing is located is curved with a single eastbound and westbound vehicle lane in each direction, curbing on the outside edge of the vehicle lanes, and a shoulder and ditch within the median. This roadway design has been constructed to allow for the addition of two vehicle lanes and a raised and curbed median to make a four-lane divided roadway with an urban cross section in the future. The south side of Bison Drive features an asphalt multi-use path and the north side features a standard concrete sidewalk. Land use along Bison Drive between the Bridge Lake Drive and Appleford Gate roundabouts is residential with continuous fencing along the frontage and no vehicle access to Bison Drive.



Figure 1: Study Area



Photo 1: Image of Crossing Location Looking East (source: Google Streetview)



Photo 2: Crossing Location Looking South



Photo 3: Footprints Through the Median at the Crossing Location

The long-term plan would see Bison Drive connected between Kenaston Boulevard Northbound and Waverley Street and Bison Drive extended westward from Appleford Gate across Brady Road and into the RM of Macdonald. If these plans are completed, Bison Drive is expected to eventually become a four-lane divided Regional Street within the study area with higher traffic volumes than currently experienced; however, these changes are likely to occur several years in the future.

Bison Drive at the crossing location has a speed limit of 50 km/h. A speed study conducted in June 2019 indicated that the average speed on Bison Drive between Bridge Lake Drive and Appleford Gate is 52 km/h and the 85th percentile speed is 58 km/h. Sixty percent of vehicles were recorded travelling above 50 km/h. These higher than posted speed results likely reflect

the lack of visual friction in this section of Bison Drive with a wide roadway cross section, low traffic volumes, no parking, no private approaches, and continuous fencing along the land uses. Average weekday volume on Bison Drive between Bridge Lake Drive and Appleford Gate is approximately 2,500 vehicles, which is relatively low for a street like Bison Drive and a reflection that the roadway is located at the edge of the Waverley West development. There are no reported collisions at the proposed crossing location.

CURRENT PEDESTRIAN CROSSING CONTROL GUIDELINES

Current Pedestrian Crossing Control Guidelines were approved by the Standing Policy Committee on Infrastructure Renewal and Public Works on January 11, 2013. These guidelines are based on the Pedestrian Crossing Control Guide published by the Transportation Association of Canada (TAC). The Pedestrian Crossing Control Guide presents a set of principles to guide professionals during the decision-making process associated with the provision of pedestrian crossing control. The warrant for a treatment system is based on factors that include pedestrian volume at the crossing location, vehicular traffic volume, proximity to other traffic control devices, and route connectivity requirements. The City considers that a warrant is fulfilled when the following two criteria from the Pedestrian Crossing Control Guide are met:

1. Average hourly pedestrian volume in terms of Equivalent Adult Units (EAUs) is greater or equal to 15 per hour over a minimum seven-hour continuous period and Average Daily Traffic (ADT) is greater or equal to 1,500 vehicles per day. EAUs account for age and differences in physical ability. For example, an able-bodied adult is considered as 1.0 EAU, an unaccompanied child (estimated age ≤ 12 years) is considered as 2.0 EAUs, a senior citizen (estimated age >65 years) is considered as 1.5 EAUs, and an individual of any age with a physical impairment is considered as 2.0 EAUs.
2. The proposed crossing location is at a minimum distance, from the nearest form of traffic control, typically between 100 and 200 metres for a particular location. This may vary based on a location's individual traffic characteristics and engineering judgment.

Pedestrian and cyclist crossings of Bison Drive and the proposed controlled crossing location were counted between June 11-12, 2019 (a Tuesday and Wednesday) for a total duration of 15 hours. During the 15-hour count, 95 pedestrians and 21 cyclists were recorded using the crossing (none of which were unaccompanied children 12 years of age or younger) and during the highest use seven-hour period 77 EAU's were counted, which averages to 11 EAU's per hour. ***As a result, the basic warrant is not met at this time due to insufficient crossing demand.*** The minimum distance requirement of 100 metres is met and appears reasonable as any vehicles approaching from the roundabout at Bridge Lake Drive are leaving the roundabout at a lower speed and there are no signal controls that could be confused with controls at the crossing. Collision history does not appear to be an issue, as there have been no reported collisions at the intersection to date.

In addition to the warrant, the need for crossing control based on latent demand, system connectivity and considerations for linking land uses as outlined in the TAC Pedestrian Crossing Control Guide was reviewed. With respect to latent demand, the current absence of curb ramps, accessible grades in the median, and a paved crossing surface represent deterrents to potential users with mobility issues, younger users and people pushing strollers. This crossing is also located in a new and developing area and it would be anticipated that the number of potential users will continue to increase as the development of Waverley West continues. From a system connectivity standpoint, this location is a key point joining the Bridgwater Trails and Lakes neighbourhoods and joining Bridgwater Lakes to the Bison Drive Multi-Use path and, by

extension, the Bridgwater Centre commercial area and a future South Winnipeg Recreation Campus. As such, it forms an important link for those choosing pedestrian and cycling modes for short trips that might otherwise be made by a vehicle. The connection also provides an important link for walking and cycling as recreational activities.

Based on the above, although a warrant is not met at this time, there is a basis to propose a controlled crossing due to future growth in demand, latent demand, system connectivity, and to encourage mode choices other than vehicle travel. The TAC guideline's "Decision Support Tool – Treatment Selection Matrix" *recommends* a crossing control treatment based on the following factors: Average Daily Traffic (ADT) volumes, speed limit, and roadway cross section. In the case of the Bison Drive location, the matrix decision would be based on a cross section with two lanes per direction with a raised median refuge (there isn't a category for the current single lane divided cross section on Bison Drive so the long term cross section was used), a speed limit of 50 km/h or less, and an annual traffic volume below 4,500 vehicles. Based on the guideline's "Decision Support Tool – Treatment Selection Matrix", the recommended minimum treatment across Bison Drive would be a signed and marked crosswalk. However, the higher recorded operating speeds on Bison Drive and unusual and wide cross section (including shoulders) are important factors that indicate that a higher order Rectangular Rapid Flashing Beacon (RRFB) treatment system, similar to the image in Photo 4, would be appropriate in the short and long term at this location.



Photo 4: Rectangular Rapid Flashing Beacon (RRFB) Installation (source TAC)

Implementing an RRFB crossing at the Bison Drive location would require more than the installation of the devices, signs, and pavement markings. The multi-use path would need to be physically constructed across the crossing location. This construction would include paving, detectable tiles, addressing median drainage, and flattening grades through the median.

SUMMARY

The review of crossing control at the location on Bison Drive between Bridge Lake Drive and Appleford Gate indicated that the location is not currently warranted for pedestrian crossing control. However, now that it has been studied, the location can be added to the Public Works pedestrian crossing control priority list for future consideration based on future growth in demand, latent demand, system connectivity, and to encourage mode choices other than vehicle travel.

The proposed crossing control is an RRFB treatment system, which has recently been approved by the Province of Manitoba. This is a new device for Winnipeg, with an estimated installation cost of \$35,000 for a solar powered beacon on a four lane roadway with a median and an annual maintenance cost of approximately \$3,750. The RRFB crossing will be prioritized amongst other warranted pedestrian crossing locations and will be installed as resources allow. Installation costs would be funded through the Traffic Engineering Improvements Program subject to the availability of resources and City-wide priorities. Maintenance of the crossing will be the responsibility of the Traffic Signals and Traffic Services branches, using operating budgets.

The RRFB crossing features a push button actuated crossing, with a set of rectangular rapid flashing beacons on both sides of the street and visible by both directions of vehicle travel. The treatment also consists of signs advising of the pedestrian crossing as well as paint on the roadway. Photo 5 shows an RRFB crossing installation in Saskatoon, SK (in Manitoba, paint markings would differ).



Photo 5: Typical RRFB Pedestrian Crossing Installation on a Four Lane Divided Roadway.

FINANCIAL IMPACT

Financial Impact Statement Date: [March 2, 2020](#)

Project Name:

**Safer Cycling and Pedestrian Connection - Bridgwater Lakes and
Bridgwater Trails**

COMMENTS:

There is no financial impact associated with the recommendation of this report.

The preliminary cost estimate for the solar powered Rectangular Rapid Flashing Beacon is \$35,000 and an annual maintenance cost of approximately \$3,750. At this time there is no approved budget allocated to deliver this project. This work will be placed on the priority list for installation through the Traffic Engineering Improvement Program subject to available budget and City-wide priorities.

"Original signed by J. Peters, CPA, CGA"

J. Peters CPA, CGA

Acting Manager of Finance & Administration

CONSULTATION

This Report has been prepared in consultation with: N/A

OURWINNIPEG POLICY ALIGNMENT

The recommendation of this report is aligned with the key strategic goal of a safe, efficient and equitable transportation system for people, goods and services in the Sustainable Transportation Direction Strategy that supports OurWinnipeg.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

N/A

SUBMITTED BY

Department: Public Works

Division: Transportation

Prepared by: C. Flather, P.Eng., M.Sc., Traffic Management Engineer

Date: March 3, 2020

File No.: A-08