

**Minutes – Standing Policy Committee on Infrastructure Renewal and Public Works –
June 9, 2020**

REPORTS

**Item No. 11 Pedestrian Crossing Control Treatments for 2020 Capital Project
Budgets (Watt Street at Harbison Avenue and Archibald Street at
Plinguet Street)**

STANDING COMMITTEE DECISION:

The Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Winnipeg Public Service and approved the following:

1. That a pedestrian half signal be installed on Watt Street at Harbison Avenue.
2. That a rectangular rapid flashing beacon be installed on the south leg of Archibald Street at Plinguet Street.
3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

**Minutes – Standing Policy Committee on Infrastructure Renewal and Public Works –
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DECISION MAKING HISTORY:

Moved by Councillor Sharma,

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

Carried

ADMINISTRATIVE REPORT

Title: Pedestrian Crossing Control Treatments for 2020 Capital Project Budgets (Watt Street at Harbison Avenue and Archibald Street at Plinguet Street)

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

AUTHORIZATION

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

EXECUTIVE SUMMARY

This report discusses two intersections (Watt Street at Harbison Avenue and Archibald Street at Plinguet Street) where pedestrian crossing control treatments are recommended. The treatments are warranted based on the guidance provided in the Transportation Association of Canada (TAC) *Pedestrian Crossing Control Guide*.

The recommended treatment at Watt Street and Harbison Avenue is a pedestrian half signal and the estimated capital cost is \$155,000. Installation will be funded by the Accelerated Regional Street Renewal Program – Watt St. / Munroe Ave. / Johnson Ave. West location. The installation will be completed under Tender No. 147-2020 – Award of Contract for 2020 Watt Street Pavement Renewal & Water Main Renewal – Contract 8, which was awarded to Bayview Construction Ltd. by the Interim Chief Administrative Officer on April 29, 2020. The combined estimated annual maintenance and operating cost associated with this signal is \$5,000.

The recommended treatment at Archibald Street and Plinguet Street is a rectangular rapid flashing beacon (RRFB) and the estimated capital cost is \$25,000. Installation will be funded by the Accelerated Regional Street Renewal Program – Archibald Street location. The installation will be completed under Tender No. 219-2020 – 2020 Regional Street Renewal Program - Archibald Street Pavement Rehabilitation, which has not been awarded as of this report. The combined estimated annual maintenance and operating cost associated with this treatment is \$2,500.

RECOMMENDATIONS

1. That a pedestrian half signal be installed on Watt Street at Harbison Avenue.
2. That a rectangular rapid flashing beacon be installed on the south leg of Archibald Street at Plinguet Street.
3. That the proper officers of the City to do all things necessary to implement the intent of the foregoing.

REASON FOR THE REPORT

As the City's Traffic Authority, the Standing Policy Committee on Infrastructure Renewal and Public Works must approve the installation of traffic control signals, including activated pedestrian crossing control treatments. The Winnipeg Public Service has determined that a pedestrian half signal is warranted on Watt Street at Harbison Avenue and an RRFB is warranted on Archibald Street at Plinguet Street.

IMPLICATIONS OF THE RECOMMENDATIONS

The 2020 Capital Budget adopted by Council on March 20, 2020, includes funding for the 2020 Regional and Local Street Renewal Program in the amount of \$130,322,000; with \$71,386,000 allocated to the 2020 Accelerated Regional Street Renewal Program, of which \$4,800,000 is funding for Watt St. / Munroe Ave. / Johnson Ave. West and \$4,700,000 is funding for Archibald Street.

With the adoption of the 2020 Capital Budget, Council authorizes first charges on all 2021 accelerated streets, of which \$4,850,000 is allocated to Watt St. / Munroe Ave. / Johnson Ave. West and \$4,900,000 is allocated to Archibald Street.

The combined estimated annual maintenance and operating cost of \$7,500 associated with the pedestrian half signal and RRFB will be funded by the Public Works Department Transportation Division Operating Budget.

HISTORY/DISCUSSION

PEDESTRIAN CROSSING CONTROL WARRANT

In recommending the installation of new pedestrian crossing control the Winnipeg Public Service follows the guidance provided in the Transportation Association of Canada (TAC) *Pedestrian Crossing Control Guide*. 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 crossing 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 metres and 200 metres for a particular location. This may vary based on a location's individual traffic characteristics and engineering judgment.

If pedestrian crossing control is warranted, the guideline's "Decision Support Tool – Treatment Selection Matrix" recommends a treatment based on the Average Daily Traffic (ADT) volumes, speed limit, and roadway cross section.

WATT STREET AND HARBISON AVENUE

The Watt Street Renewal Project occurring in summer 2020 includes street works from Chalmers Avenue to Munroe Avenue. Watt Street between Chalmers Avenue and Munroe Avenue is a Regional Street, a full-time truck route, and a transit route. The study area is illustrated in Figure 1.

There are signalized intersections at Chalmers Avenue and Washington Avenue but no additional controlled pedestrian crossing locations for approximately 570 metres between these two intersections. The Chalmers Neighbourhood Renewal Corporation has identified safety concerns regarding the lack of controlled pedestrian crossings along this segment of Watt Street. By coordinating with the Watt Street Renewal Project it is an ideal time to identify appropriate pedestrian crossing locations and integrate the work into the renewal project.



Figure 1: Watt Street Study Area

The typical approach to identify candidate pedestrian crossing control sites is to conduct pedestrian volume counts to ensure that minimum pedestrian volume warrants are met; however, pedestrian volume counts were not conducted along this segment of Watt Street. Based on the need to provide system connectivity and considerations for linking land uses (as outlined in the TAC Pedestrian Crossing Control Guide) an additional controlled pedestrian crossing location along this segment of Watt Street is desirable. System connectivity refers to the continuity of pedestrian facilities to ensure safe pedestrian travel and may be required when there are no crosswalks within a reasonable walking distance.

The intersection of Watt Street and Harbison Avenue was identified by the Public Works Active Transportation Branch as the most ideal location along this segment of Watt Street. Harbison Avenue was identified due to the following:

- It is located approximately half the distance between Chalmers Avenue (230 metres to the south) and Washington Avenue (310 metres to the north).
- The transit stops for Route 20 and Route 43 are located immediately at the intersection.
- Harbison Avenue has a recently constructed pathway connecting to the Northeast Pioneers Greenway.
- The upcoming review of the Pedestrian and Cycling Strategies will identify Harbison Avenue as a future neighbourhood greenway and the City's Bike Map will be updated to designate the street as a Low-Stress Route.

Based on the above, there is a basis to propose a controlled crossing at Watt Street and Harbison Avenue to provide system connectivity and link the residential neighbourhoods on either side of Watt Street. 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. Watt Street has a four-lane undivided cross-section with a speed limit of 50 km/h and an average weekday traffic volume of 14,200 vehicles per day (based on the 2018 Traffic Flow Map). The recommended minimum treatment across Watt Street would be a pedestrian corridor.

However, the traffic volume of 14,200 vehicles per day is nearing the warrant threshold of 15,000 vehicles per day which would warrant the installation of a pedestrian half signal. Since the 2018 volume is near the upper end of the volume range and this traffic volume is anticipated to nominally increase annually, it can be expected that in the near future traffic volumes will likely exceed 15,000 vehicles per day. For this reason, the higher order pedestrian half signal treatment system would be appropriate to meet the longer term needs of this location.

The estimated capital cost for installation is \$155,000 and will be funded by the Accelerated Regional Street Renewal Program – Watt St. / Munroe Ave. / Johnson Ave. West location. The installation will be completed under Tender No. 147-2020 – Award of Contract for 2020 Watt Street Pavement Renewal & Water Main Renewal – Contract 8, which was awarded to Bayview Construction Ltd. by the Interim Chief Administrative Officer on April 29, 2020. The combined estimated annual maintenance and operating cost associated with this signal is \$5,000.

ARCHIBALD STREET AND PLINGUET STREET

The Archibald Street Project includes street works from Plinguet Street to Doucet Street. The extent of this work area includes the existing pedestrian crosswalk with ground-mounted signs on Archibald Street at Plinguet Street (shown in Figure 2, below). This crosswalk is primarily used by employees of nearby businesses to access transit routes on Archibald Street.

As part of the Archibald Street Renewal Project a review of the existing crosswalk locations was completed to evaluate compliance with the TAC Guide's "Decision Support Tool – Treatment Selection Matrix". Archibald Street on the south side of Plinguet Street is a two lane roadway with a narrow pedestrian island. The Average Weekday Daily Traffic (AWDT) volume is approximately 14,300 vehicles, and the posted speed limit is 60 km/h. Based on the Guide's

“Decision Support Tool – Treatment Selection Matrix”, the recommended pedestrian crossing control treatment for Archibald Street is a rectangular rapid flashing beacon (RRFB).

The estimated capital cost for installation is \$25,000 and will be funded by the Accelerated Regional Street Renewal Program – Archibald Street location. The installation will be completed under Tender No. 219-2020 – 2020 Regional Street Renewal Program - Archibald Street Pavement Rehabilitation, which has not been awarded as of this report. The combined estimated annual maintenance and operating cost associated with this treatment is \$2,500.



Figure 2: Pedestrian Crosswalk on Archibald Street at Plinguet Street (facing southbound)

FINANCIAL IMPACT

Financial Impact Statement

Date: May 12, 2020

Project Name: First Year of Program **2020**

Pedestrian Crossing Control Treatments for 2020 Capital Project Budgets (Watt Street at Harbison Avenue and Archibald Street at Plinguet Street)

	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Capital					
Capital Expenditures Required	\$ 181,225	\$ -	\$ -	\$ -	\$ -
Less: Existing Budgeted Costs	181,225	-	-	-	-
Additional Capital Budget Required	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Funding Sources:					
Debt - Internal	\$ -	\$ -	\$ -	\$ -	\$ -
External	-	-	-	-	-
Grants (Identify)	-	-	-	-	-
Reserves, Equity, Surplus, Other	-	-	-	-	-
Total Funding	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Total Additional Capital Budget Required	<u>\$ -</u>				
Total Additional Debt Required	<u>\$ -</u>				
Current Expenditures/Revenues					
Direct Costs	\$ -	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500
Less: Incremental Revenue/Recovery	6,225	-	-	-	-
Net Cost/(Benefit)	\$ (6,225)	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500
Less: Existing Budget Amounts	(6,225)	7,500	7,500	7,500	7,500
Net Budget Adjustment Required	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

Additional Comments: The total estimated cost of \$181,225 will be funded by the Regional Street Renewal Program - Accelerated Roads. Public Works Capital Projects (#1804102919 - Watt St-Chalmers-Munroe NBCF, \$155,335 and #1804103619 - Archibald-Plinguet-Doucet-NBCF, \$25,890). Direct costs of \$7,500 per year represent the annual maintenance and operating costs of the traffic signals and will be funded by the Public Works Department Transportation division operating budget. Incremental Revenue/Recovery represents the Departmental Engineering and Corporate Interest overheads.

"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 Sustainable Transportation Direction Strategy developed as part of OurWinnipeg forms the policy framework for the Transportation Master Plan (TMP). Sustainable Transportation identified a vision and five Key Strategic Goals which are critical to achieving a balanced and sustainable transportation system for Winnipeg. These goals form the basis for the TMP and the directions and strategies contained within it:

1. A transportation system that is dynamically integrated with land use;
2. A transportation system that supports active, accessible and healthy lifestyle options;
3. A safe, efficient and equitable transportation system for people, goods and services;
4. Transportation infrastructure that is well maintained
5. A transportation system that is financially sustainable

The recommendations within this report are consistent with the Key Strategic Goals.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

N/A

SUBMITTED BY

Department: Public Works
Division: Transportation
Prepared by: Keenan Patmore, M.Sc., P.Eng., Regional Traffic Engineer
Date: May 12, 2020