

**Minutes – Standing Policy Committee on Infrastructure Renewal and Public Works –
May 2, 2019**

REPORTS

**Item No. 12 Traffic Study – Lakewood Boulevard
(St. Boniface 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

STANDING COMMITTEE RECOMMENDATION:

On March 6, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its May 2, 2019 meeting for the Winnipeg Public Service to report back on the matter.

On January 8, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted an extension of time to its March 6, 2019 meeting for the Winnipeg Public Service to report back on the matter

On April 6, 2018, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Riel Community Committee, as amended, and directed the Winnipeg Public Service to:

1. Conduct a traffic study along Lakewood Blvd, with specific emphasis on the following locations:
 - A. J.H. Bruns Collegiate and surrounding area.
 - B. Ecole Van Belleghem and surrounding area.
2. Report back within 180 days on potential measures to improve pedestrian safety.

Councillor Allard, St. Boniface Ward, submitted a communication dated April 6, 2018, in support of the matter.

COMMUNITY COMMITTEE RECOMMENDATION:

On March 5, 2018 the Riel Community Committee passed the following motion:

WHEREAS parents and administrators have raised concerns about the safety of students crossing Lakewood Blvd to attend J.H. Bruns Collegiate;

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DECISION MAKING HISTORY (continued):

COMMUNITY COMMITTEE RECOMMENDATION (continued)

AND WHEREAS Lakewood Blvd has seen a steady increase in overall traffic volumes due to continuing development south of Bishop Grandin Blvd;

AND WHEREAS a student was struck by a vehicle and injured outside J.H. Bruns Collegiate in the recent past;

THEREFORE BE IT RESOLVED that the Winnipeg Public Service be directed to:

1. Conduct a traffic study along Lakewood Blvd, with specific emphasis on the following locations:
 - A. J.H. Bruns Collegiate and surrounding area.
 - B. Ecole Van Belleghem and surrounding area.
2. Report back within 90 days on potential measures to improve pedestrian safety.

and forwarded to the Standing Policy Committee on Infrastructure Renewal and Public Works.

ADMINISTRATIVE REPORT

Title: Traffic Study – Lakewood Boulevard (St. Boniface Ward)

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	D. McNeil

EXECUTIVE SUMMARY

A traffic study was conducted on Lakewood Boulevard with specific emphasis on the area surrounding École Van Belleghem and J.H. Bruins Collegiate. The traffic study included collecting speeds and/or traffic volumes at nine locations, conducting site visits, and meeting with the administration of both schools.

The results of the speed study demonstrate that there is good compliance with the 50 km/h and 30 km/h (Reduced Speed School Zone) speed limits, therefore, measures to reduce speeds are not recommended at this time.

The intersection of Lakewood Boulevard and Vermillion Road / Weatherstone Place met the warrant for traffic control signals. The Winnipeg Public Service will consult with the local community and conduct additional design work before determining if a traffic control signal is recommended.

The crosswalk on Lakewood Boulevard on the north side of Meadowbrook Road, does not meet the criteria of the City's technical guideline for pedestrian crossing controls. Another pedestrian count will be conducted at this location in the summer of 2019 when pedestrian activity may be higher due to warmer weather to determine if a standard pedestrian crosswalk is warranted.

The intersection of Lakewood Boulevard and Willowlake Crescent offers several pedestrian safety improvements, including curb ramp realignment and an eastbound Urban Smart Channel, therefore, no additional modifications to this intersection is recommended at this time.

Based on the data collected, a crosswalk on Lakewood Boulevard between Willowlake Crescent and Beaverhill Boulevard is not recommended at this time.

RECOMMENDATIONS

1. That this report be received as information.

REASON FOR THE REPORT

On April 6, 2018, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred with the recommendation of the Riel Community Committee, as amended, and directed the Winnipeg Public Service to:

1. Conduct a traffic study along Lakewood Boulevard, with specific emphasis on the following locations:
 - A. J.H. Bruins Collegiate and surrounding area.
 - B. École Van Belleghem and surrounding area.
2. Report back within 180 days on potential measures to improve pedestrian safety.

IMPLICATIONS OF THE RECOMMENDATIONS

None.

HISTORY/DISCUSSION

Lakewood Boulevard is a two-lane undivided street in the St. Boniface Ward. The speed limit is 50 km/h and the average weekday traffic volumes are between 10,000 and 12,000 vehicles per day, which is characteristic of a major residential collector street. Lakewood Boulevard is the main north-south connection for the community of Southdale and intersects with Fermor Avenue to the north, and Bishop Grandin Boulevard to the south. Sidewalks are provided on either side of Lakewood Boulevard. There are all-way stop controlled intersections at Lakewood Boulevard and Vermillion Road/Weatherstone Place, Edgewater Drive, and Willowlake Crescent, and a roundabout at the intersection with Beaverhill Boulevard.



Figure 1: Lakewood Boulevard Study Area (Image source: iView)

The traffic study focused on the area surrounding two schools on Lakewood Boulevard: (1) École Van Belleghem, which is an elementary school located on the southeast corner of Lakewood Boulevard and Vermillion Road/Weatherstone Place; and (2) J.H. Bruins Collegiate, which is a high school located at the southwest corner of Lakewood Boulevard and Willowlake Crescent. J.H. Bruins Collegiate shares a parking lot with Southdale Community Centre.

Traffic volumes and/or speeds were collected at nine locations on Lakewood Boulevard in November 2018. Site visits were conducted and meetings were held with the administration at both schools to discuss the study and understand their traffic concerns.



Figure 2: Data Collection Locations (Image source: iView)

TRAFFIC SPEEDS

Speed data was collected at four locations on Lakewood Boulevard using pneumatic tubes. There was a malfunction of the counter on Lakewood Boulevard at Tamarac Bay and speed data could not be retrieved at this location. However, data from the other three locations provide a sufficient understanding of operating speeds on Lakewood Boulevard. The results of the speed study are shown in Table 1 and demonstrate that there is good compliance with the 50 km/h and 30 km/h speed limits.

The 85th percentile speed reflects the speed at or below which 85 percent of motorists operate their vehicle. When the speed limit is close to or equal to the 85th percentile speed, the speed limit is considered credible and respected by drivers. Where a 50 km/h speed limit applies, the 85th percentile speed on Lakewood Boulevard ranges between 44 km/h and 49 km/h, and the average speed ranges between 36 km/h and 43 km/h. There is a 30 km/h reduced speed school zone on Lakewood Boulevard adjacent to École Van Belleghem School. The 85th percentile speed on Lakewood Boulevard in the reduced speed school zone is 33 km/h and the average speed is 25 km/h.

Table 1: Speed Study Results for Combined Northbound and Southbound Traffic on Lakewood Boulevard (Data from November 2018)

Location	Metric					
	Speed Limit	85 th Percentile Speed	Average Speed	% of Vehicles Traveling Above 55 km/h	% of Vehicles Traveling Above 60 km/h	Total Vehicles Studied
North of Meadowbrook Road Outside of Reduced-Speed School Zone Hours	50 km/h	44 km/h	38 km/h	0.6%	0.1%	47,322
North of Meadowbrook Road During Reduced-Speed School Zone Hours	30 km/h	33 km/h	25 km/h	N/A	N/A	47,225
North of Brookhaven Bay (south leg)	50 km/h	47 km/h	36 km/h	2.3%	0.9%	80,936
North of Tahoe Bay (south leg)	50 km/h	49 km/h	43 km/h	3.9%	1.2%	79,408

Based on the speed study results, traffic calming measures to reduce speeds on Lakewood Boulevard are not considered warranted and are not recommended at this time.

LAKWOOD BOULEVARD AND VERMILLION ROAD / WEATHERSTONE PLACE INTERSECTION

Lakewood Boulevard and Vermillion Road / Weatherstone Place is an all-way stop controlled intersection. Lakewood Boulevard changes from a two-lane undivided cross section to a four-lane divided cross section approximately 60 metres south of Vermillion Road / Weatherstone Place. Vermillion Road and Weatherstone Place are two-lane undivided streets. Vermillion Road is classified as a collector street and Weatherstone Place is classified as a local street.

The administration of École Van Belleghem has expressed concerns about pedestrian safety for students crossing this intersection due to high traffic volumes. Student patrols are supervised by an adult crossing guard at this intersection during school arrival and dismissal times. The school's administration has shared that the patrols are well-trained and have received awards for their performance.

Because the intersection is situated at the boundary of residential area to the south and commercial area to the north, as well as the elementary school in the southeast quadrant, pedestrian crossing volumes are quite high. The average north-south pedestrian crossing volume is 33 Equivalent Adult Units (EAUs) per hour, and the average east-west pedestrian crossing volume is 36 EAUs.

Northbound and southbound through movements on Lakewood Boulevard constitute the highest proportion of motor vehicle traffic volumes at the intersection. Some turning movements are also heavy: the westbound left from Vermillion Road to Lakewood Boulevard constitutes over 70% of the total westbound approach volume; and the northbound right from Lakewood to Vermillion Road constitutes 30% of the total northbound approach volume. As a multi-lane all-way stop controlled intersection, high turning volumes combined with high pedestrian traffic creates a high workload environment and leads to road user confusion regarding who has the right-of-way. Conflicts between road users were observed during site visits. The collision history indicates there have been nine right-angle, or turn-related collisions reported at this intersection in the past three years of available data.

This intersection was assessed according to the City's technical guidelines for traffic control signals. The traffic control signal installation warrant uses the conflicting vehicular and pedestrian traffic volumes during the six busiest hours. The cross product is multiplied by a series of factors such as pedestrian demographics, roadway characteristics, percentage of large vehicles, speed limit, and spacing to the nearest intersection. An intersection that scores any value of 100 or higher indicates that the conflicting traffic volumes are sufficient to consider traffic control signal installation.

The intersection of Lakewood Boulevard and Vermillion Road / Weatherstone Place scored 139 points, which suggests that a traffic control signal may be considered. However, a traffic control signal is not recommended at this time. Because it is an intersection of two collector streets and a local street, and is adjacent to an elementary school, the Winnipeg Public Service would like to consult with the school's administration and local community, as well as conduct additional design work, before determining if a traffic control signal is recommended.

As part of the additional design work, the Winnipeg Public Service will explore opportunities to improve pedestrian connectivity and reduce pedestrian crossing distance at the intersection, specifically on the north leg where there are no curb ramps or median refuge currently. Based on site visit observations, there is some driver confusion and last minute lane changes on Lakewood Boulevard associated with the change in cross section from two-lane undivided to four-lane divided. Opportunities to improve driver expectancy will also be reviewed.

LAKWOOD BOULEVARD AND MEADOWBROOK ROAD INTERSECTION

Lakewood Boulevard and Meadowbrook Road is a minor-street stop-controlled intersection. There is a school crosswalk on Lakewood Boulevard on the north side of Meadowbrook Road.

The administration of École Van Belleghem has advised that the crosswalk is not patrolled and students are not encouraged to use the crosswalk. Rather, students cross Lakewood Boulevard at the all-way stop controlled intersection with Vermillion Road / Weatherstone Place, which is patrolled during school arrival and dismissal times.

The City's technical guideline for pedestrian crossing control specifies that a school crosswalk may be considered warranted if it meets the following criteria:

- The posted speed limit is less than or equal to 60 km/h.
- The crossing location is at a distance "d" from the nearest form of traffic control. Where "d" is set at any distance between 100 metres and 200 metres and depends on factors such as road type and expected queue lengths.
- The crossing is adjacent to or near an elementary school where patrols/crossing guards are present during school arrival and dismissal times.
- The crossing is at a public pathway frequented by elementary school children on their way to/from school, which are supported by the school patrol/crossing guard program.

The school crosswalk on Lakewood Boulevard at Meadowlark Road does not meet the above criteria since it is not supported by the school patrol/crossing guard program.

The demand for a standard pedestrian crosswalk was assessed at this location. To meet the criteria for a marked crosswalk, the average hourly pedestrian volume should be 15 EAUs or higher, according to the TAC Pedestrian Crossing Control Guide and the City's technical guideline for pedestrian crossing control. A 15-hour pedestrian count was conducted on November 15, 2018 and found the average hourly pedestrian crossing volume to be five (5) (EAUs). No older adults or unaccompanied children were recorded crossing at the school crosswalk. Another pedestrian count will be conducted at this location in the summer of 2019 when pedestrian activity may be higher due to warmer weather. The existing school crosswalk will remain while the investigation into the demand for a standard pedestrian crosswalk continues.

LAKWOOD BOULEVARD AND WILLOWLAKE CRESCENT INTERSECTION

Lakewood Boulevard and Willowlake Crescent is an all-way stop-controlled intersection. There is a right turn channel for the eastbound right movement from Willowlake Crescent to Lakewood Boulevard that is controlled by a yield sign. The westbound approach is a gated private approach which accommodates low traffic volumes. The predominate movements at the intersection are the eastbound right, northbound left, and northbound and southbound through movements.

This intersection was reconstructed in 2016 and the new design offers several pedestrian safety improvements. Figure 3 and Figure 4 show aerial images of the former and current geometry. The former southbound right turn channel was not required based on the turning volume. Removing the southbound right turn channel reduces turning speeds at the intersection and provides a more direct crossing for pedestrians. Curb ramps were realigned on all quadrants and tactile markings were added to assist pedestrians with vision impairments. The geometry of the eastbound right turn channel was also modified to improve pedestrian safety. The new design is considered an Urban Smart Channel which offers several benefits over the former compound curve design, including:

- Slower vehicle turning speeds,
- Improved entry angle sight lines, and
- Improved visibility to pedestrians.

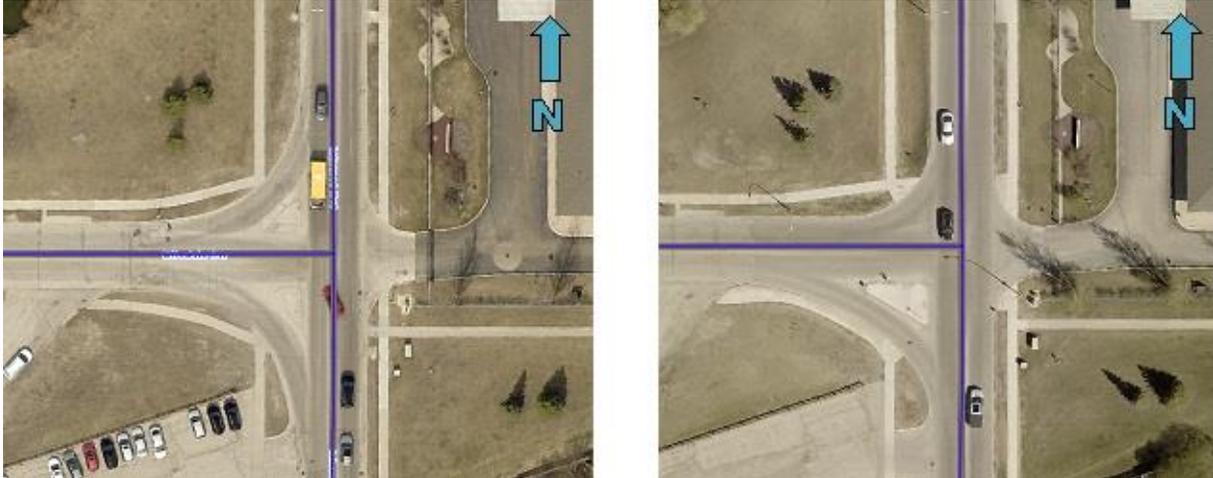


Figure 3: Lakewood Boulevard and Willowlake Crescent – Before, 2016 (left); After, 2018 (right) (Image source: iView)

The improvements to Lakewood Boulevard and Willowlake Crescent completed in 2016 have improved pedestrian safety therefore no additional modifications to this intersection are recommended at this time.

LAKWOOD BOULEVARD IN FRONT OF J.H. BRUINS COLLEGIATE

The administration of J.H. Bruins Collegiate has expressed concerns about turning movements between the high school parking and Lakewood Boulevard due to traffic volumes on Lakewood Boulevard. If left turns from the parking lot onto Lakewood Boulevard are difficult, drivers are encouraged to turn right onto Lakewood Boulevard and make a U-turn at the roundabout with Beaverhill Boulevard. No collisions have been reported on this segment of Lakewood Boulevard between 2013 and 2017 that can be linked to the private approaches to the high school. If safety concerns persist, turning restrictions at the private approaches could be implemented to prevent left turns from the parking lot and direct traffic to make U-turns at the roundabout; this is not recommended at this time, as the safety concerns have not been substantiated in the collision history.

The administration of J.H. Bruins Collegiate has expressed concerns about high school students crossing Lakewood Boulevard at midblock locations between Willowlake Crescent and Beaverhill Boulevard. There are no marked crosswalks along this approximately 425 metre stretch of Lakewood Boulevard. From the front door of the high school, the nearest controlled crossing is 80 metres north at the all-way stop-controlled intersection with Willowlake Crescent.

Data provided by the Louis Riel School Division shows that there are only six residences east of Lakewood Boulevard between Willowlake Crescent and Beaverhill Boulevard that may generate students crossing this segment. Other students who reside to the east would be more likely to cross at the all-way stop at Willowlake Crescent or the roundabout at Beaverhill Boulevard.

There are six transit stops (three northbound and three southbound) on Lakewood Boulevard between Willowlake Crescent and Beaverhill Boulevard. Average daily boarding and alighting volumes from the fall of 2018 were reviewed and show that the stops have relatively low activity. The busiest transit stop is northbound Lakewood Boulevard at Cyril Place, where an average of 10 passengers alight daily, all after 3:30pm. These passengers are not likely to be high school students based on the time of activity. The northbound stop on Lakewood Boulevard at

Tamarac Bay has an average of five passengers alighting daily: two passengers between 5:00 a.m. and 9:00 a.m., and two passengers after 3:30 pm.



Figure 4: Average Daily Boarding and Alighting Volumes at Transit Stops (data from the fall of 2018) (Image source: iView)

Additionally, school buses drop-off and pick-up students in a bus loop off of Willowlake Crescent. Students who take school buses are not required to cross Lakewood Boulevard.

A crosswalk on Lakewood Boulevard between Willowlake Crescent and Beaverhill Boulevard is not recommended at this time.

FINANCIAL IMPACT

Financial Impact Statement **Date:** [March 15, 2019](#)

Project Name:

Traffic Study – Lakewood Boulevard (St. Boniface Ward)

COMMENTS:

There are no financial impacts associated with the recommendation of this report.

"Original Signed by J. Ruby, CPA, CA"

J. Ruby CPA, CA

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.

SUBMITTED BY

Department: Public Works

Division: Transportation

Prepared by: R. Peterniak, M.Sc., P.Eng, Community Traffic Engineer

Date: April 3, 2019