

**Agenda – Standing Policy Committee on Infrastructure Renewal and Public Works –
February 4, 2020**

REPORTS

**Item No. 19 Reducing Speed on Kenaston Boulevard between North Town Road
and South Town Road
(Waverley West Ward)**

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

That this report be received as information.

**Agenda – Standing Policy Committee on Infrastructure Renewal and Public Works –
February 4, 2020**

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On November 19, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works granted a further extension of time to its February 4, 2020 meeting for the Winnipeg Public Service to report back on the matter.

On October 1, 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 January 8, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Assiniboia Community Committee and directed the Winnipeg Public Service to explore options for reducing speed along Kenaston Boulevard between North Town Road and South Town Road with the use of flashing warning lights, or other recommended devices to calm traffic on both sides of Bridgwater Town Centre, and report back to the Standing Committee within 240 days.

COMMUNITY COMMITTEE RECOMMENDATION:

On December 4, 2018, the Assiniboia Community Committee passed the following motion:

WHEREAS Kenaston Boulevard is major trade and transportation corridor with a speed limit of 80 kilometers per hour;

AND WHEREAS the Bridgwater Town Centre is located in the middle of two lanes of Kenaston Boulevard;

AND WHEREAS residents of the Neighborhoods of Bridgwater are attempting to cross Kenaston on foot or bike to access the Town Centre shopping area;

AND WHEREAS many residents have contacted the area Councillor expressing safety concerns with the speed;

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DECISION MAKING HISTORY (continued):

COMMUNITY COMMITTEE RECOMMENDATION (continued):

THEREFORE BE IT RESOLVED that the Standing Policy Committee on Infrastructure Renewal and Public Works be requested to direct the Winnipeg Public Service to explore options for reducing speed along Kenaston Boulevard between North Town Road and South Town Road with the use of flashing warning lights or other recommended devices to calm traffic on both sides of Bridgwater Town Centre.

ADMINISTRATIVE REPORT

Title: Reducing Speed on Kenaston Boulevard between North Town Road and South Town Road

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

Kenaston Boulevard from North Town Road to South Town Road was designed (and accepted in 2006 by Council) to be an expressway, accommodating a large volume of vehicles in a safe and efficient manner.

Kenaston Boulevard is designed as a couplet, with northbound and southbound traffic separated. The couplet design provides safer intersections for both vehicles and pedestrians, as one direction of traffic is eliminated and intersection and pedestrian crossing distances are shortened. The one-way couplet operation requires pedestrians to cross only three lanes east/west, as opposed to six lanes and a median, on a typical high-speed facility.

On January 8, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works directed the Winnipeg Public Service to explore options for reducing speed along Kenaston Boulevard between North Town Road and South Town Road with the use of flashing warning lights or other recommended devices to calm traffic on both sides of Bridgewater Town Centre.

The traffic assessment for Kenaston Boulevard shows the speed limit has good adherence. The collision review does not show a cause for concern as there are not elevated occurrences of any particular type of collision. There have been no reported pedestrian collisions at any of the six intersections.

Pedestrian countdown signals are in place at Kenaston Boulevard (both southbound and northbound) at North Town Road, Bison Drive and South Town Road.

A design and cost estimate for advanced warning flashers will be prepared for northbound Kenaston Boulevard at South Town Road and southbound Kenaston Boulevard at North Town Road.

As the juxtaposition of a high-volume, higher-speed corridor intended to move traffic efficiently and a residential area frequented by pedestrians and cyclists creates challenges (that are not unique to this location), the Public Service will continue to observe and monitor Kenaston in this area.

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

On January 8, 2019, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the recommendation of the Assiniboia Community Committee and directed the Winnipeg Public Service to explore options for reducing speed along Kenaston Boulevard between North Town Road and South Town Road with the use of flashing warning lights, or other recommended devices to calm traffic on both sides of Bridgewater Town Centre, and report back to the Standing Committee within 240 days.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications as a result of this recommendation.

HISTORY/DISCUSSION

BACKGROUND INFORMATION

Kenaston Boulevard from Bishop Grandin Boulevard has the following history:

- On July 26, 2006, Council concurred in the recommendation of the Standing Policy Committee on Property and Development, as amended by Executive Policy Committee, and adopted By-law No. 10/2006 "Waverley West Area Structure Plan (ASP).
- On December 12, 2012, Council concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works and designated this segment as a Full Time Truck Route (Schedule 1 of the City of Winnipeg Traffic By-law No. 1573/77), and it also designated this segment of Kenaston Boulevard as a Regional Street (Schedule E of the City of Winnipeg Streets By-law No. 1481/77).
- On November 26, 2012, the Standing Policy Committee on Infrastructure Renewal and Public Works authorized the Winnipeg Public Service to apply to the Highway Traffic Board of the Province of Manitoba to apply a Modified Speed Limit of 80 km/h on northbound and southbound Kenaston Boulevard from Bishop Grandin Boulevard to Provincial Trunk Highway (PTH) 100. The 80 km/h speed limit was approved by the Highway Traffic Board, and regulated in October 2013. The speed limit was implemented in a staggered approach by the fall of 2014 when the Kenaston Boulevard extension was fully opened to traffic.

ANALYSIS

The Kenaston Boulevard extension from Bishop Grandin Boulevard to PTH No. 100 (South Perimeter Highway) is a multi-lane regional street, and a full-time truck route. The Average Weekday Daily Traffic (AWDT) volume is approximately 21,000 vehicles, and it has a speed limit of 80 km/h.

The cross-sectional geometry varies from four-lane divided to two lanes per direction of a one-way couplet. See Figure 1. This report focuses on considering a change in the speed limit of the one-way couplet, as per the disposition.



Figure 1: Kenaston Boulevard Study Area (Photo Source: iView)

The Area Structure Plan (ASP) for this area outlines the types of roadways and their uses.

Policy 8.1.5 of the ASP states: “Kenaston Boulevard shall function as an expressway with a limited number of at-grade intersections...”. The “anticipated posted speed limit of 80 kilometres per hour”, is described in Section 8.1 Regional Road Network of the ASP, and is consistent with subsequent SPC IRPW and Highway Traffic Board approvals for an 80km/h speed limit.

Refer to Appendix A: Excerpt of By-law No. 10/2006 “Waverley West Area Structure Plan” for more information.

The design of the one-way couplet of Kenaston Boulevard:

- facilitates a greater degree of access to the town centre area from the adjacent neighbourhoods;
- reduces the impact that a major road facility such as Kenaston Boulevard has upon the character of the surrounding neighbourhoods;
- provides a safe means of entering the major roadway from a minor roadway with a right-turn-only access for the direction of travel;
- allows the “town centre” to be located between two major roadways, making it the centre of commerce and services for both the east and west side of the area;
- provides safer intersections for both vehicles and pedestrians, as one direction of traffic is eliminated at each intersection; and
- decreases pedestrian crossing distances from six lanes and a median to three lanes.

Speed Study

The Winnipeg Public Service conducted a speed study of Kenaston Boulevard from North Town Road to South Town Road in June 2019.

The Winnipeg Public Service’s criteria for setting speed limits is based on a number of elements, including adjacent land use, roadway access, reported collision history, roadway design, and the measured 85th percentile speed of traffic on the street (being the speed at or below which 85% of motorists operate their vehicle, provided that the collision rate is within acceptable limits). This set of criteria recognizes that the majority of motorists operate their vehicle in a reasonable and prudent manner with due consideration for conditions encountered. Establishing speed limits in this manner has proven to be effective in that it accommodates traffic in a safe and orderly way and enables police to focus their enforcement resources toward the 15% of drivers who operate at excessive speeds.

The speed study on Kenaston Boulevard (See Table 1) recorded the following 85th percentile speeds:

Location on Kenaston Boulevard (80km/h Speed Limit)	Pneumatic Tube Study 85 th Percentile Speed (Combined)
Between Waverley Street & Centre Street ramp Approx. 300m N of Waverley Street	86km/h NB 82km/h SB (85km/h)
Between Centre Street ramp & South Town Road Approx. 250m N of Centre Street ramp	86km/h NB
Between South Town Road & Bison Drive Approx. 150m N of South Town Road	85km/h NB
Between Bison Drive & North Town Road Approx. 100m N of Bison Drive	79km/h NB
Between Bishop Grandin Boulevard & Centre Street ramp Approx. 350m S of Bishop Grandin Boulevard	85km/h NB 84km/h SB 85(km/h)
Between Centre Street ramp & North Town Road Approx. 100m S of Centre Street Ramp	87km/h SB
Between North Town Road & Bison Drive Approx. 150m S of North Town Road	82km/h SB
Between Bison Drive & South Town Road Approx. 250m S of Bison Drive	85km/h SB

Table 1: Speed Study 85th Percentile Speeds

Based on this speed data, the design of the roadway, and the previous design/regulatory approvals, the Winnipeg Public Service **recommends that no changes be made to the speed limit on Kenaston Boulevard at this time.**

Changing the posted speed limit without changing the traffic operating conditions or roadway would not be expected to result in a change in observed speeds without resource-intensive, persistent enforcement. The natural inclination of motorists is to travel as quickly or slowly as conditions suggest is prudent. (Changing the traffic operating conditions or roadway would also be contrary to the mandatory policies of By-law No. 10/2006 “Waverley West Area Structure Plan”.)

Kenaston Boulevard has been developed as a high-speed route designed to move a high volume of traffic through the area. It has limited access points and is in many ways “highway like” even though it is not a true highway.

The community development surrounding Kenaston Boulevard between North Town Road and South Town Road is divided by Kenaston Boulevard. Inside the couplet, retail, services, and other uses (such as churches) necessitate pedestrian crossings across Kenaston Boulevard, and thus larger amounts of pedestrian activity than are normally desirable around high-speed traffic corridors.

The traffic characteristics on Kenaston Boulevard will be monitored as development occurs in the vicinity, as additional growth is on the horizon in the Waverley West area, specifically in “Neighbourhood B.”

The Kenaston couplet’s dual nature is similar to other segments of the road network in Winnipeg, where there are two contrary needs in play on a corridor (e.g. the “main street” versus the “commuter corridor/truck corridor” nature of Marion Street, or segments of Kenaston that are through routes that also serve heavy retail uses). The juxtaposition of conflicting needs contributes to real and perceived problems. The challenge going forward is how best to resolve these issues.

While reduced speeds would improve safety in terms of survivability of incidents involving the interaction of a pedestrian (or cyclist) with a moving vehicle (reduced speeds in such incidents have been shown to reduce the severity of injury), this benefit must be balanced against other interests, particularly on corridors that are intended for limited access by pedestrians/cyclists.

Reducing the speed on roads such as Kenaston would not necessarily make the corridor “perfectly safe”, as it already has a low number of incidents today (see Table 2), and the need for efficient movement of goods and people (which is what Kenaston was constructed to do) must not be discounted.

As such, the Public Service will continue to monitor the area.

Collision Analysis

Collision analysis typically includes a review of the last three years of available data; in this case, no data is available for 2015. Collisions were reviewed instead for the period of January 1, 2016 to December 31, 2017.

Intersection*	2015 Collisions	2016 Collisions	2017 Collisions	Comments
Kenaston Blvd & North Town Rd (2 separate intersections)	0	5	23	2016: 3 involved 90 degree collisions, no pedestrians involved 2017: 9 involved 90 degree collisions, 3 involved left turn with opposing traffic, no pedestrians involved
Kenaston Blvd & Bison Drive (2 separate intersections)	0	0	5	2017: no 90 degree collisions, no opposing left, no pedestrians involved
Kenaston Blvd & South Town Rd (2 separate intersections)	0	3	6	2016: 1 involved left turn with opposing traffic, no pedestrians 2017: 1 involved 90 degree collision, no pedestrians involved

Table 2: 2016-2017 Collision History

**While the above reflects Kenaston Boulevard intersecting with three cross streets, (this is how the data is documented), the couplet nature of Kenaston Boulevard means that actually six intersections are being captured in this information.*

The above data shows generally safe operations at the couplet's intersections.

- There were no reported collisions with pedestrians.
- 32 of 42 (76%) collisions involved wet or icy pavement.
- 4 of 42 (9.5%) collisions involved left turn with opposing through traffic.

2017 showed increased collisions, specifically at North Town Road. The increase in collision could be attributable to increased development in the area, or a specific condition which is no longer detectable through field observations.

As more recent collision data becomes available, the Public Service will conduct further collision analysis of these intersections.

Signalization and Pedestrian Safety

Signal timing and pedestrian crossing timing were also reviewed.

All traffic signal timing was found to meet current Traffic Signals Branch guidelines. The all-red period following the amber period for north/south traffic is one second at all intersections and would not change, based on current methodology, should the speed limit be reduced to 60 or 70 km/h. The all-red period is based on vehicle speed, distance from the stop line to the far-side no conflict point, vehicle length, and perception reaction time. This is accepted industry-wide practice.

Pedestrians crossing east/west are provided a seven-second 'Walk' display indicating it is safe to begin crossing the street followed by a flashing 'Don't Walk' display ranging from eight to 11 seconds, depending on the intersection, indicating a pedestrian should not begin crossing but may safely finish crossing the street. The 'Don't Walk' display follows concurrent with the amber and all red displays for east/west traffic, offering a buffer period for pedestrians prior to north/south traffic receiving a green display. The 'Flash Don't Walk' time is based on crossing distance and an assumed pedestrian speed of 1.2 m/s which is used throughout the city. For locations near senior complexes or schools or where more than 20% of users are elderly or

have mobility issues, a slower walking speed may be used; however, these locations at this time do not appear to meet these criteria.

A mitigation to improve pedestrian crossing comfort is to install pedestrian countdown signals. Pedestrian countdown signals show the time remaining during the “Flashing Don’t Walk” interval. In Winnipeg, pedestrian countdown signals are typically installed in parallel with accessible pedestrian signals, which assist pedestrians with vision impairments by providing an audible tone when it is safe to cross. The intersections in this report have accessible pedestrian signals.

Short cycle lengths, ranging between 60 and 70 seconds, at these intersections, limit the waiting time for pedestrians which generally reduces instances of illegal crossings. In comparison, Kenaston Boulevard north of Bishop Grandin Boulevard has a 136 seconds cycle length. Part of the reason short cycle lengths are possible is the relatively short crossing distance across Kenaston Boulevard. The one-way couplet operation requires pedestrians to cross only three lanes east/west as opposed to six lanes and a median on a typical high-speed facility.

Leading pedestrian intervals, in which pedestrians are given the opportunity to enter an intersection before vehicles are given a green indication, were considered for these intersections. However, it was determined that they would not provide an improvement to the pedestrian crossings here.

Another possible intersection improvement is yellow advanced warning flashers. Advanced warning flashers provide advanced indication to drivers that the traffic signal ahead is about to change from green to red. Advanced warning flashers can decrease rear-end collisions and decrease right-angle collisions.

The intersections within this study warranted for advanced warning flashers are Kenaston Boulevard southbound at North Town Road and Kenaston Boulevard Northbound at South Town Road. These intersections met warrant over the others within this report because these intersections are the first signalized intersection after a significant gap in signalization.

The cost of implementing advanced warning flashers varies based on site-specific conditions, but is typically \$45,000 per travel direction per intersection. A design and refined cost estimate for advanced warning flashers on Kenaston Boulevard between North Town Road and South Town Road will be developed. At present, no timeline exists for the provision of this infrastructure.

FINANCIAL IMPACT

Financial Impact Statement

Date: January 7, 2020

Project Name:

Reducing Speed on Kenaston Boulevard between North Town Road and South Town Road

COMMENTS:

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

"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

There is a linkage between making Winnipeg's transportation network safer and more efficient with Key Directions 3.4 "Increase Active Transportation Rates", and 3.5 "Reduce Traffic Congestion".

SUBMITTED BY

Department: Public Works

Division: Transportation

Prepared by: Multiple Staff, Transportation – Traffic Management

D. Patman, P.Eng., Manager – Transportation

Date: January 8, 2020

File No.: A-12

ATTACHMENTS: Appendix A: Excerpt of By-law No. 10/2006 "Waverley West Area Structure Plan"

APPLICABILITY OF THE PLAN

Policy Application and Interpretation

All development applications submitted with respect to any lands within the Plan Area as identified in Figure 2 are to be reviewed for compliance with the policies of this plan identified as such and numbered in accordance with the relevant sections of the plan.

Where a statement of intent accompanies a policy or policies, it is provided for information purposes only to enhance the understanding of the policy that follows.

Where the term “shall” is used in a policy, the policy is considered to be mandatory.

Where the term “should” is used in a policy it is intended that the policy should be complied with, however, the policy may be deviated from in a specific situation where this is necessary to address unique circumstances or to allow an alternate means of satisfying the original intent of the policy.

Where the term “may” is used in a policy it is intended that the policy be used as a guideline or suggestion toward implementing the original intent of the policy.

Interpretation of Maps and Figures

Unless otherwise stated within the policy provisions of this plan, the boundaries or locations of any symbols or areas shown on maps and figures attached to and forming part of this plan, are approximate only and are not intended to define exact locations except where they coincide with physical features or fixed boundaries such as property lines or rights of way.

8.0 REGIONAL TRANSPORTATION NETWORK

8.1 Regional Roadway Network

Intent

To provide for a regional roadway network to service Waverley West that is functional, safe and efficient. The regional roadway network is a key element in the determination of neighbourhood plan area configurations.

The internal network defined in the ASP-WW includes the arterial and higher roadways within Waverley West, which are Kenaston Boulevard, Waverley Street, and Bison Drive. The general locations of these roadways and related intersections are illustrated in Map 3, and are summarized as follows.

Kenaston Boulevard: Kenaston Boulevard, which currently ties directly into Bishop Grandin Boulevard, will be extended south through Waverley West. Kenaston Boulevard will enter Waverley West at the north end as a four-lane divided roadway, split into a one-way couplet in the northern portion of Waverley West, transition back to a four-lane divided roadway through the southern portion of Waverley West and connect to the Perimeter Highway. The connection to the Perimeter Highway will be an at grade intersection until such time as a grade separated interchange is warranted. Right-of-way is anticipated to be reserved to allow for three travel lanes per direction. A Town Centre is planned for the land located within the Kenaston Boulevard one-way couplet. Kenaston will function as an expressway with an anticipated posted speed limit of 80 kilometres per hour, with a limited number of at-grade intersections and no direct access from adjacent private lands.

Waverley Street: Waverley Street, which currently runs in a north-south direction along the eastern edge of Waverley West and intersects with the Perimeter Highway, will be realigned to pass through the south end of Waverley West. The existing intersection at the Perimeter Highway will be closed, and Waverley Street will curve into Waverley West beginning at approximately Sandusky Drive and extend in the southwest/west direction to intersect with Kenaston Boulevard and eventually terminate at Brady Road. Waverley Street will function as a four-lane divided roadway through Waverley West. Waverley Street from Bishop Grandin Boulevard to Sandusky Drive is anticipated to have a posted speed limit of 70 kilometres per hour, while Waverley Street from Sandusky Drive to Brady Road is anticipated to have a posted speed limit of 60 kilometres per hour.

Bison Drive: Bison Drive, which currently terminates at Waverley Street, will be extended southwest through Waverley West and eventually terminate at or near Brady Road. ~~Bison Drive is expected to overpass the one-way couplet portions of Kenaston Boulevard.~~ Bison Drive will function as a four-lane divided roadway, likely with a posted speed limit of 60 kilometres per hour through Waverley West.

Policies

- 8.1.1 The Waverley West area shall be provided with a hierarchical network of streets.
- 8.1.2 The conceptual arterial street network as illustrated on Map 3 shall not be amended without a Secondary Plan amendment.
- 8.1.3 Each Neighbourhood Area Structure Plan shall provide for and plan the relevant portions of the arterial street network as illustrated on Map 3.
- 8.1.4 Specific right-of-way requirements for the arterial and higher road network shall be further defined at the Neighbourhood Area Structure plan and development application processes.
- 8.1.5 Kenaston Boulevard shall function as an expressway with a limited number of at-grade intersections, and no direct access from adjacent private lands.
- 8.1.6 The network of existing and proposed arterial and higher streets shall serve as a means of delineating the Neighbourhood Plan Areas within Waverley West (see also sections 4.2 and 13.1)
- 8.1.7 The City of Winnipeg shall have the ability to acquire additional right-of-way through standard dedication practices to accommodate the regional roadway network.
- 8.1.8 Phasing and Staging of roadway infrastructure shall be carried out generally in accordance with the Waverley West General Phasing Scheme (see also section 14.2), to be revised and updated at each subsequent Neighbourhood Plan process.

8.2 Grade Separated Locations

Intent

To identify where future grade-separated intersections and flyovers may be required within the Waverley West Plan Area.

The major arterial intersections within Waverley West have been investigated. Based on forecast future traffic volumes for full build-out scenarios of Waverley West, grade separations are necessary at the following locations within Waverley West to maintain the expressway function of Kenaston Boulevard as per City of Winnipeg policy (illustrated in Map 3):

~~Northbound Kenaston Boulevard and Bison Drive: A flyover shall be necessary at the intersection of northbound Kenaston Boulevard and the future configuration of Bison Drive. Kenaston Boulevard should underpass Bison Drive at this location.~~