

All-Way Stop Control - Karnwood Drive and Knightsbridge Road

Date: January 28, 2019
To: Scarborough Community Council
From: Acting Director, Traffic Management, Transportation Services
Wards: Ward 20 – Scarborough Southwest

SUMMARY

This staff report is about a matter for which the Community Council has delegated authority from City Council to make a final decision.

This report recommends that an All-Way Stop Control be installed at the intersection of Karnwood Drive and Knightsbridge Road as the existing conditions meet the warrant for the installation of such a traffic control device. This location currently has a stop control facing the northbound and southbound approach on Karnwood Drive.

RECOMMENDATIONS

The Acting Director, Traffic Management, Transportation Services recommends that:

1. Scarborough Community Council authorize all-way compulsory stop control at the intersection of Karnwood Drive and Knightsbridge Road.

FINANCIAL IMPACT

The financial cost of installing the signs, pavement markings and any required civil works (ramps and walkways) to accommodate accessible pedestrian crossings is approximately \$10,000.00. The funding for the signs and pavement markings are available in the interim Operating Budget.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

As a result of a request from Councillor Michael Thompson, Transportation Services staff reviewed the feasibility of installing an all-way stop control at the intersection of Karnwood Drive and Knightsbridge Road.

Existing Conditions

The following characteristics describe Karnwood Drive and Knightsbridge Road:

- This intersection is located west of Pharmacy Avenue and south of Edge Park Avenue.
- Karnwood Drive and Knightsbridge Road are two-lane local roads with a posted speed limit of 40 km/h.
- Currently, northbound and southbound traffic on Karnwood Drive is required to stop at Knightsbridge Road.
- There are sidewalks on all sides of the subject intersection.
- Clairlea Public School is located north-west of the intersection.

Analysis

All-way Stop Control Warrant Study

Study Date: September 19, 2018

Time period: 8:00 a.m. to 9:00 a.m. and 3:00 p.m. to 4:00 p.m.

All-Way Stop Control Warrant	Total Approach Vehicle Volume	Vehicle/Pedestrian Volume Crossing Major Road	Unit Volume Split* Major/Minor Roads
Two-Hour Study Period Average	244	114	56/44
Warrant Requirements For Study Period Average For Local Roads	≥ 250	≥ 100	≥ 30/70 or ≤ 70/30

* “Unit Volume Split”: Major Road Volume – Vehicles only.
Minor Road Volume – Vehicles plus pedestrians crossing the major road.

- For an all-way stop control to be numerically justified, the traffic volume requirements for the “Study Period Average” must be completely satisfied in either of the following two combinations of the above three categories:

1. **“Total Approach Vehicle Volume”** and **“Unit Volume Split – Major/Minor Roads”**

Or

2. **“Vehicle/Pedestrian Volume Crossing Major Road”** and **“Unit Volume Split – Major/Minor Roads”**

As outlined in the table, the traffic volumes meet the requirements to install an all-way stop control at the intersection of Greencrest Circuit and Holmfirth Terrace. As such, Transportation Services staff recommend the installation of an all-way stop control at the intersection of Karnwood Drive and Knightsbridge Road.

Automatic 24-Hour Speed Study

Study Location: Knightsbridge Road, between Karnwood Drive and Rosalind Crescent

Study Date: Thursday May 10, 2018

Speed Limit: 40 Km/h

Location	Speed Ranges – Km/h					Total Vehicles 24 Hours	85 th Percentile Speed*
	1 - 40	41 - 50	51 - 60	61 - 65	> 65		
Eastbound	452	218	19	1	2	692	45 km/h
Westbound	516	227	21	3	0	767	45 km/h
Totals	968	445	40	4	2	1459	Average 85th 45 km/h

* The 85th percentile speed is the speed at or below which the majority of motorists are travelling. This generally reflects the speed at which most motorists feel comfortable travelling on a given section of roadway, taking into consideration traffic volumes and surrounding conditions.

Collision History

A review of the collision records revealed that there has been no reported preventable collisions nor pedestrian related collisions on Karnwood Drive and Knightsbridge Road during the five-year period ending December 31, 2017.

In summary, staff recommend the installation of an all-way stop control at the intersection of Karnwood Drive and Knightsbridge Road as the technical requirements are met.

CONTACT

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SIGNATURE

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ATTACHMENTS

1. Location Plan (All-Way Stop Control – Karnwood Drive and Knightsbridge Road).

Attachment 1 - Location Plan (All-Way Stop Control – Karnwood Drive and Knightsbridge Road)

