



Town of Newmarket
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Stonehaven Avenue and Best Circle (west) All-way Stop Review Staff Report to Council

Report Number: 2022-04

Department(s): Engineering Services

Author(s): M. Kryzanowski, Manager, Transportation Services

Meeting Date: January 31, 2022

Recommendations

1. That the report entitled Stonehaven Avenue and Best Circle (west) dated January 31, 2022 be received; and,
2. That the existing stop control at the intersection be maintained; and,
3. That Staff be authorized and directed to do all things necessary to give effect to this resolution.

Purpose

The purpose of this report is to summarize the findings and recommendations of the All-Way Stop review for the Stonehaven Avenue and Best Circle (west) All-Way Stop Control request.

Background

At its regular meeting of September 13, 2021, the Committee of the Whole referred the following recommendation to staff:

That Council direct staff to report back to Council by Q4 2021 regarding a three-way stop to be added to the west side of Best Circle and Stonehaven Avenue.

By way of background on Stonehaven Avenue, a pedestrian fatality occurred on Best Circle (east side) just south of Stonehaven Avenue in October 2020, and this location is in excess of 300 meters from the subject intersection. The Stonehaven Avenue/Best

Circle (east) intersection has an existing all-way stop control with ladder pavement markings to increase awareness of pedestrian crossings. In 2021, additional tree trimming was performed to improve illumination from street lighting and to improve sight line distances.

Closer to the subject intersection, in late 2021 a yellow pavement marking centre median was installed immediately to the west and through the curved section of Stonehaven Avenue. These painted centre medians have been used in the Town with success in reducing speeds and are continuing to be monitored here.

Discussion

Stonehaven Avenue is a residential primary collector road that is a major east-west connection between Leslie Street and Bayview Avenue. Best Circle is a local residential road that intersects Stonehaven Avenue twice. The eastern connection aligns with the Stonehaven Public School driveway and currently is an All-Way Stop. The western connection, and the subject of this report, connects with Stonehaven Avenue in a 'T' intersection.

Staff proceeded by conducting a 5-hour traffic count at the intersection. The traffic count was performed in conformance with the Town's Transportation Management Policy, which requires that the number of vehicle turning movements and pedestrian activity be counted on a weekday between 7:00 AM and 9:00 AM and between 3:00 PM and 6:00 PM.

The subject intersection was then analysed to determine if the All-Way Stop warrants were met. The All-Way Stop warrant consists of three (3) parts. The first part addresses the future signalization of intersections. This part does not apply, since traffic signals are not planned for the intersection.

The second part of the All-Way Stop warrant examines the frequency of recorded vehicle collisions at the intersection for the twelve (12) month period prior to the review. A search of our records indicated that no vehicle collisions occurred within the intersection during that time period.

The third part of the warrant deals with both traffic and pedestrian volumes on the major and minor streets of the intersection. Accordingly, staff calculated the total number of vehicles and pedestrians approaching the intersection on an hourly basis, and the average volume on the minor street (Best Circle, in this case). Both the major and minor street warrants need to be 100% or greater to warrant an All-Way Stop control.

The results of the All-Way Stop warrant analysis confirmed that the all-approach volume reached 100% of the required minimum warrant volume of 500, and the minor street volume was only 13% of the required minimum warrant volume of 200. Accordingly, the intersection does not meet the warrants for an All-Way Stop control based on the minor street approaching volumes.

The technical reference documents based on research and experience indicate that All-Way Stop controls are to be used for right-of-way control, and they have been proven ineffective as speed control measures. Unwarranted All-Way Stops create additional issues, such as stop non-compliance, thereby posing a potential new danger to pedestrians. The compliance rate for motorists stopping at unwarranted All-Way Stop controlled intersections has been shown to be low as it has been observed that a number of vehicles will disobey the stop sign or attempt a rolling stop in light of very infrequent conflicting vehicles at the intersection. Another issue caused by unwarranted stop signs is an increase in speeds as drivers accelerate away from the intersection to make up for lost time.

The low approach volume from Best Circle would translate to a potentially high amount of stop non-compliance on Stonehaven Avenue and create a potentially worse road safety condition. Further, traffic volumes are unlikely to increase significantly coming from Best Circle since it is already built out.

Conclusion

Based on the data collected and an analysis of the numerical warrants, as well as a concern for high non-compliance, it is recommended that an All-Way Stop control at the Stonehaven Avenue and Best Circle (west) intersection not be implemented.

Business Plan and Strategic Plan Linkages

Well-planned and connected...strategically planning for the future to improve information, access and enhance travel to, from, and within Newmarket.

Consultation

There was not direct consultation with the preparation of this report.

Human Resource Considerations

None.

Budget Impact

None.

Attachments

None.

Approval

Sepideh Majdi, Acting Director, Engineering Services

Peter Noehammer, Commissioner, Development & Infrastructure Services

Contact

For more information or questions regarding this report, please contact Mark Kryzanowski, Manager, Transportation Services, at 905-895-5193 extension 2508 or mkryzanowski@newmarket.ca