



**STAFF REPORT
ACTION REQUIRED**

Proposed Minor Street Stop Signs – Applefield Drive Area

Date:	October 15, 2007
To:	Scarborough Community Council
From:	Director, Transportation Services, Scarborough District
Wards:	Ward 37 – Scarborough Centre
Reference Number:	P:\2007\Cluster B\TRA\Scarborough\sc07062 D07-2017 Applefield Stop Signs

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 responds to a request to install All-Way Stop Controls at the intersections of Applefield Drive and Waterfield Drive, Waterfield Drive and Tordale Crescent, and the north and south intersections of Applefield Drive and Tordale Crescent. The report shows that these four intersections failed to meet the required technical warrant for this type of traffic control. However, since the north and south intersections of Applefield Drive and Tordale Crescent are uncontrolled three-way intersections, Transportation Services staff recommend the installation of minor street stop signs on Tordale Crescent at both locations.

Transportation Services staff reviewed the installation of minor street stop signs at two other uncontrolled three-way intersections in the Bendale Neighbourhood (Stokewell Place and Waterfield Drive, and Verlaine Place and Applefield Drive).

It is recommended that minor street stop signs be installed at the four subject uncontrolled three-way intersections to clearly define the right-of-way and to regulate traffic flow.

RECOMMENDATIONS

Transportation Services, Scarborough District, recommends that Scarborough Community Council:

1. Not approve the installation of an All-Way Stop Control at the intersection of Applefield Drive and Waterfield Drive,
2. Not approve the installation of an All-Way Stop Control at the intersection of Waterfield Drive and Tordale Crescent,
3. Not approve the installation of an All-Way Stop Control at the north intersection of Applefield Drive and Tordale Crescent,
4. Not approve the installation of an All-Way Stop Control at the south intersection of Applefield Drive and Tordale Crescent,
5. Adopt the “Compulsory Stops” regulation, as identified in Appendix 1 of this report, and
6. Amend the appropriate by-law accordingly.

Financial Impact

The financial cost of installing the four recommended stop controls is approximately \$600.00. The funding for these stop controls is available in the Transportation Services 2007 Operating Budget, within Cost Centre TP0226.

ISSUE BACKGROUND

Further to a request from City Councillor Michael Thompson, Transportation Services staff reviewed the feasibility of installing All-Way Stop Controls at the intersections of Applefield Drive and Waterfield Drive, Waterfield Drive and Tordale Crescent, and the north and south intersections of Applefield Drive and Tordale Crescent.

The justification for the installation of an All-Way Stop Control is based on a technical warrant adopted by Council for use in the City of Toronto.

COMMENTS

The following characteristics describe the four subject intersections:

- These intersections are located in the community west of Brimley Road and south of Ellesmere Road.
- All roadways are two-lane local roadways with a speed limit of 50 kilometres per hour (not signed).
- The intersections of Applefield Drive and Waterfield Drive, and Waterfield Drive and Tordale Crescent, are four-way intersections, which are presently controlled by stop signs on Waterfield Drive and Tordale Crescent, respectively.
- The north and south intersections of Applefield Drive and Tordale Crescent are three-way intersections, which are presently uncontrolled.
- Sidewalks are located on both sides of all roads.
- Applefield Drive and Waterfield Drive have daily traffic volumes of approximately 400 vehicles per day.

All-Way Stop Control Warrant Study

A traffic study conducted at the four subject intersections during the morning and afternoon peak hours of a typical weekday (Wednesday, October 3, 2007) produced the following results:

Study Location	All-Way Stop Control Warrant Two-Hour or Four-Hour* Study Period Average		
	A Total Approach Vehicle Volume	B Vehicle/Pedestrian Volume Crossing Major Road	C Unit Volume Split** Major/Minor Roads
Applefield Drive at Tordale Crescent, North Intersection	32	9	76/24
Applefield Drive at Tordale Crescent, South Intersection	29	8	72/28
Applefield Drive at Waterfield Drive*	41	24	55/45
Waterfield Drive at Tordale Crescent	50	15	72/28
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 Categories A and C, or Categories B and C.

As outlined in the above table, the traffic volumes do not meet the requirements to install an All-Way Stop Control at any of the above intersections at this time.

In addition, notwithstanding the traffic volume requirements, the spacing requirement for the installation of this traffic control device is not met at the intersection of Waterfield Drive and Tordale Crescent. Specifically, a minimum spacing of 250 metres is required between traffic control devices. This is the minimum spacing at which a motorist can detect a traffic control device or hazard, recognize it, and perform the necessary manoeuvre in safety. This intersection is located only 92 metres west of the traffic control signals at Waterfield Drive and Brimley Road; therefore, this intersection is not physically suitable for the installation of an All-Way Stop Control.

A review of the Toronto Police Service collision records at these four intersections reveals a good safety record for both vehicular and pedestrian traffic. No collisions have been reported for the five-year period ending December 31, 2006. However, since the north and south intersections of Applefield Drive and Tordale Crescent are uncontrolled three-way intersections, it would be prudent to install a minor street stop sign on Tordale Crescent at both locations to clearly define the right-of-way and to encourage motorists to stop before the sidewalk to enhance pedestrian safety.

Staff identified two other uncontrolled three-way intersections in the immediate area. Accordingly, to provide stop sign uniformity, and for the same safety reasons, minor street stop signs are recommended at the following two locations:

1. Stokewell Place at Waterfield Drive
2. Verlaine Place at Applefield Drive

When installed, the subject minor street stop signs will help to clarify road right-of-way, regulate traffic flow and enhance public safety.

CONTACT

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SIGNATURE

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ATTACHMENTS

1. Appendix 1 – By-law Amendment (enact)
2. Location Plan (Proposed Stop Signs – Applefield Drive and Waterfield Drive Area)

Appendix 1

“Compulsory Stops”
Regulation to be Enacted

Column 1
Intersection

Column 2
Stop Street

Stokewell Place and
Waterfield Drive

Stokewell Place

Tordale Crescent and
Applefield Drive,
North Intersection

Tordale Crescent

Tordale Crescent and
Applefield Drive,
South Intersection

Tordale Crescent

Verlaine Place and
Applefield Drive

Verlaine Place