



**STAFF REPORT
ACTION REQUIRED**

Traffic Flow (40km/h Speed Limit, Traffic Control Signals/Pedestrian Crossings): Wilson Heights Boulevard

Date:	October 13, 2011
To:	North York Community Council
From:	Director, Transportation Services, North York District
Wards:	Ward 10 – York Centre
Reference Number:	<i>ny11126</i>

SUMMARY

As the Toronto Transit Commission (TTC) operates a transit service on Wilson Heights Boulevard, City Council approval of this report is required.

To deny the request to amend the speed limit to 40 km/h on Wilson Heights Boulevard from Model Avenue to Sunbeam Avenue.

The existing traffic and roadway conditions do not warrant the installation of a 40 km/h speed zone at this above noted location.

RECOMMENDATIONS

Transportation Services, North York District recommends that City Council:

1. Deny the amendments to the posted speed limit on Wilson Heights Boulevard from Model Avenue to Sunbeam Avenue;
2. Deny the installation of a traffic control signal or pedestrian crossover at the intersection of Wilson Heights Boulevard and Goodwill Avenue; and
3. Deny the installation of flashing beacons for northbound and southbound traffic on Wilson Heights Boulevard in the vicinity of Goodwill Avenue.

Financial Impact

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

ISSUE BACKGROUND

Transportation Services, North York District, was requested by the Ward Councillor on behalf of the area residents to review the following issues:

- Reduce the posted speed limit of 60 km/h to 40 km/h on Wilson Heights Boulevard from Model Avenue to Sunbeam Avenue.
- Install Flashing Beacons for both northbound and southbound traffic.
- Install Traffic Control Signals/Pedestrian Crossover at the intersection of Wilson Heights Boulevard and Goodwill Avenue.
- Install a Pedestrian Warning signage on Wilson Heights Boulevard in the vicinity of Goodwill Avenue.

COMMENTS

Speed Limit Reduction (40 km/h Speed Zone)

Transportation Services has reviewed the feasibility of reducing the speed limit on Wilson Heights Boulevard from Model Avenue to Sunbeam Avenue, from 60 km/h to 40 km/h.

Wilson Heights Boulevard is designated as a four-lane minor arterial roadway with a posted speed limit of 60 km/h between Sheppard Avenue West and Wilson Avenue. The width of the pavement is approximately 14.5 metres with a municipal sidewalk on the east side of Wilson Heights Boulevard between Model Avenue and Sunbeam Avenue. Located on the northwest corner of the intersection of Wilson Heights Boulevard and Wilson Avenue is the Toronto Transit Commission Wilson Station access and parking facility. The east side of the roadway is comprised of residential properties.

On January 19, 20 and 22, 2007, Toronto City Council adopted a Road Classification System. The City of Toronto's Road Classification criteria identifies legal speed limits ranging from 50 – 60 km/h for major arterial roads (with odd cases of 70 km/h and 80 km/h), 40 – 60 km/h for minor arterial roads and 30 – 50 km/h on local roadways.

The intent of the arterial roads in Toronto is to provide continuous traffic routes between important locations within the City. In most cases, they are comprised of a minimum of four lanes of traffic in order to provide adequate capacity to accommodate high traffic volumes.

It should be noted that, operating speeds tend to vary with traffic density. When traffic density is high (i.e. cars are bumper to bumper with little room to manoeuvre – as in downtown during rush hour), speeds are significantly reduced (30 – 40 km/h). When traffic density is medium (i.e. cars are fairly close with some room for manoeuvrability),

speeds are moderate, ranging from 40 to 50 km/h. When traffic is light (i.e. volume is low and ample room for manoeuvrability exists), speeds would be high (50 km/h and greater).

Therefore in view of the above, Transportation Services had developed a warrant for the implementation of permanent 50 km/h speed limits on arterial roadways. Additionally, City Council at its meeting of April 23, 24, 25, 26, 27, and its special meeting held on April 30, May 1 and 2, 2001, also approved the harmonized Policy for the introduction of a 40 km/h speed limit on all roadways although primarily for local and collector roadways.

In order to assess the existing traffic conditions, 24-hour vehicle volume and speed studies were conducted on this section of Wilson Heights Boulevard. The following table identifies the results of those studies:

Wilson Heights Blvd	Dir	Speed Limit	Vehicle Speeds		Traffic Volume		
			Operating	Average	AM	PM	24 Hr
Faith Ave to Model Ave	NB	60	67	60	757	1544	6964
	SB		70	63	1413	856	6290

Therefore, in keeping with the primary function of the arterial roads, a 60 km/h speed limit is deemed to be the most appropriate, unless the prevailing conditions of roadway, traffic operation and safety warrant indicate otherwise.

The four categories/factors that are used to determine whether the speed of an arterial road should be reduced to 50 km/h are pedestrian and bicycle factors, collision factor, roadway geometry factors and roadway operation factors. Whereas the 40 km/h speed limit policy considers various roadway characteristics such as safety concerns, collision patterns, location of pedestrian generators such as school and the absence of municipal sidewalks.

In applying both the criteria's established (summaries attached), a reduction of the speed limit on Wilson Heights Boulevard between Model Avenue and Sunbeam Avenue is not justified. Specifically, given that the existing operating speed is greater than 60 km/h, pedestrian volumes/activity is low, there is a municipal sidewalk on the east side of the roadway and there are no schools along this section of Wilson Heights Boulevard.

Furthermore, it was noted that there have been zero collisions reported in the preceding three year period ending December 31, 2010, where vehicle speed was identified as a factor.

Therefore, in keeping with the primary function of the arterial roads, the 60 km/h speed limit is deemed to be appropriate, as such, this Division is unable to support a reduction of the speed limit to 40 km/h or 50 km/h on this section of Wilson Heights.

Flashing Beacon Signals

Based upon Ontario Traffic Manual, Book 12, Traffic Signals, flashing beacons may be used at locations where full traffic control signals are not justified but where, due to lack

of visibility or other hazards, regulatory or cautionary signs are not sufficient. Since motorists and pedestrian sight lines were found to be clear and unobstructed on this section of Wilson Heights Boulevard, the installation of flashing beacon signals is not feasible.

Traffic Control Signals/Pedestrian Crossover

Goodwill Avenue is designated as a local roadway and located approximately 145 metres south of Model Avenue and approximately 220 metres north of Wilson Avenue. Currently, westbound traffic on Goodwill Avenue is required to stop at Wilson Heights Boulevard. The north/south traffic on Wilson Heights Boulevard is uncontrolled with the exception of the traffic control signals at Wilson Avenue to the south and Reiner Road to the north. It should be noted that the driveway for the Wilson Heights Subway TTC commuter parking lot is located on the west side of Wilson Heights Boulevard opposite Goodwill Avenue.

On April 22, 2010, this Division conducted an eight-hour turning movement count at the intersection of Wilson Heights Boulevard and Goodwill Avenue. The results of the study indicate that technical requirements for the installation of a traffic control signal were satisfied to the following extent:

Warrant 1:	Minimum Vehicular Volume	44%
Warrant 2:	Delay to Cross Traffic	67%
Warrant 3:	Collision Hazard	6%

To satisfy the installation of traffic control signals, one of either the Minimum Vehicular Volume or Delay to Cross Traffic warrants must be 100 percent satisfied, or both must be satisfied to the extent of 80 percent. The Collision Hazard warrant is based on the number of collisions susceptible to correction by the installation of traffic control signals, and must be 100 percent satisfied.

In reviewing the most recent three-year collision history for the Wilson Heights Boulevard and Goodwill Avenue intersection, there has been one collision of a type susceptible to correction by the installation of traffic control signals.

To determine the feasibility of installing a pedestrian crossover and to identify the existing traffic conditions and any difficulty pedestrians experience when crossing Wilson Heights Boulevard, this Division conducted an eight-hour pedestrian delay study on April 22, 2010.

The technical warrants for the installation of a pedestrian crossover were satisfied to the following extent:

Warrant 1:	Pedestrian Volume	63%
Warrant 2:	Pedestrian Delay	40%

To support the installation of a pedestrian crossover, both warrants must be satisfied 100 percent. Our study revealed that during the eight-hour study, a total of 142 pedestrians crossed Wilson Heights Boulevard in the vicinity of Goodwill Avenue, whereas a minimum of 225 are required. Of the pedestrians that crossed, 53 experienced delays greater than 10 seconds, whereas a minimum of 130 pedestrians must be observed being delayed crossing the road.

In reviewing the most recent three-year collision history for the Wilson Heights Boulevard and Goodwill Avenue intersection, there have been zero collisions involving pedestrian crossing Wilson Heights Boulevard, in the vicinity of Goodwill Avenue.

In view of the above, this Division is unable to recommend the installation of either traffic control signals or a pedestrian crossover on Wilson Heights Boulevard, in the vicinity of Goodwill Avenue.

Pedestrians Ahead signs

Based upon Ontario Traffic Manual, Book 6 Warning Signs, Pedestrians Ahead signs should be installed where field observations have indicated that a significant number of pedestrians frequently cross the roads or walk adjacent to it, provided that pedestrian volumes are not high enough to justify the installation of a pedestrian crossover.

As such, this Division recommends the installation of Pedestrians Ahead signs on Wilson Heights Boulevard in the vicinity of Goodwill Boulevard to provide advance warning to motorists that pedestrians may be in the area.

The Ward Councillor has been advised of the recommendations contained within this staff report.

CONTACT

Ann S. Khan, P. Eng.
Manager, Traffic Operations
Transportation Services, North York District
Tel: 416-395-7463 Fax: 416-395-7544
Email: akhan5@toronto.ca

SIGNATURE

Myles Currie
Director

ATTACHMENTS

Attachment 1: Map – Wilson Heights Blvd: 40 km/h Speed Zone

Attachment 2: 50 km/h Maximum Speed Limit Warrant: Wilson Heights Blvd

Attachment 3: 40 km/h Maximum Speed Limit Warrant: Wilson Heights Blvd