

## **COMMITTEE OF THE WHOLE - DECEMBER 3, 2007**

### **FOREST RUN BOULEVARD, TEN OAKS BOULEVARD AND DUFFERIN HILLS DRIVE TRAFFIC REVIEW**

#### **Recommendation**

The Commissioner of Engineering and Public Works recommends:

1. That this report be received for information;
2. That a flush-to-grade impressed concrete crosswalk be installed in 2008 on the south side of Confederation Parkway and Dufferin Hills Drive and funding for the crosswalk is available from 2007 Traffic Calming Capital Budget EN-1687-07;
3. That ladder-style crosswalk markings be installed in 2008 at the three existing school crosswalks on Forest Run Boulevard – at Ten Oaks Boulevard, at Vanguard Road, and at Dufferin Hills Drive as a new initiative for pedestrian crossing identification;
4. That the ladder style crosswalk markings be installed utilizing paint at a cost of \$2,400 for 3 locations funded from the approved 2008 Operating Budget; and
5. That if sufficient funds are available in the approved 2008 Budget following staff's review of the planned 2008 pavement marking program, durable markings be utilized in place of paint for the ladder style crosswalk markings.

#### **Economic Impact**

Should Council approve the flush-to-grade impressed concrete crosswalk on Confederation Parkway, the approximate cost to install would be \$12,000. Should Council approve the installation of painted 'ladder-style' crosswalks in three locations on Forest Run Boulevard, the approximate cost to install would be \$2,400 for paint or \$13,500 for durable markings. It is noted that the life expectancy of the durable markings is approximately 8 years whereas the paint marking would have to be renewed annually at a cost of \$2,400 per year (\$19,200 over 8 years).

#### **Communications Plan**

That Mr. Lance Dutchak be informed of the findings of this report.

#### **Purpose**

To review various traffic-related concerns as received by an area resident, Mr. Lance Dutchak following a public meeting held on May 22, 2007.

#### **Background - Analysis and Options**

The initial public meeting of the Forest Run Boulevard, Dufferin Hill Drive, and Ten Oaks Boulevard Neighbourhood Traffic Committee was held on Tuesday, May 22, 2007 and attended by only 3 residents.

Due to the low number of residents in attendance, a Traffic Committee was unable to be formed at the conclusion of the meeting. Subsequent to the public meeting, staff received a letter from an area resident, Mr. Lance Dutchak, who had a number of traffic-related concerns for the above three streets as well as for Confederation Parkway.

Traffic-related concerns were raised for the area including excessive traffic volumes and speeds, safety for pedestrians, and parking concerns at North Hill Private School. The concerns will be reported below on a street-by-street basis.

Confederation Parkway

Confederation Parkway is a feeder roadway with a posted speed limit of 40 km/h. with a pavement width of 11.5 metres. There are existing all-way stop controls at five intersections in the study area – at Belvia Drive, at Dufferin Hills Drive, at Ten Oaks Boulevard, at Camden Drive, and at Westway Crescent. Agostino Park and a future school site are located on the west side of Confederation Parkway. Refer to Attachment No. 1 for location.

Staff collected speed and volume data with an automatic traffic recorder on Confederation Parkway and was conducted on a 24-hour basis. The result of the study is shown in the table below.

Location	Direction	Highest 24-hour volume	Average Speed
Confederation Parkway south of Ten Oaks Boulevard October 24-29, 2007	Northbound	2780	44 km/h
	Southbound	2869	44 km/h
	Total	5649	

The average recorded vehicle speeds are 44 km/h, which is below the existing statutory 50 km/h speed limit. All recorded volumes are within capacities for feeder roadways. Feeder roadways accommodate traffic volumes not exceeding 8,000 vehicles per day.

A radar speed study was also conducted on Confederation Parkway north of Tuscana Boulevard on Thursday, November 1, 2007 from 8:00-9:00am and from 4:00-5:00pm. The results of the radar study are shown below.

Location	Time	Direction	Average Speed
Confederation Parkway north of Tuscana Boulevard November 1, 2007	8:00-9:00am	Northbound	38 km/h
		Southbound	39 km/h
	4:00-5:00pm	Northbound	38 km/h
		Southbound	42 km/h

The posted speed limit in this section of Confederation Parkway is 40 km/h. The average speeds recorded show a good compliance with the posted speed limit.

A request was made for speed humps on Confederation Parkway between Tuscana Boulevard and Dufferin Hills Drive, and between Camden Drive and Ten Oaks Boulevard. Based on the Traffic Calming Warrant, speed humps are not recommended on Confederation Parkway as vertical traffic calming measures are to be discontinued on feeder roadways. This road is also indicated as a primary emergency response route. Confederation Parkway is also a York Region Transit route.

A request was made for a raised pedestrian crossing and warning signs on Confederation Parkway at Agostino Park. A pedestrian crossing study was conducted on Tuesday, November 6, 2007 from 8:00-9:00am, from 11:00am-12:00pm, and from 3:30-4:30pm to determine the number of pedestrians crossing Confederation Parkway. Pedestrians were counted crossing Confederation Parkway from Ten Oaks Boulevard to Dufferin Hills Drive. The results of the study are shown below.

Location	Time	Number of Pedestrians Crossing Confederation Parkway
Confederation Parkway from Ten Oaks Boulevard to Dufferin Hills Drive November 6, 2007	8:00-9:00am	29
	11:00am-12:00pm	12
	3:30-4:30pm	17

On the west side of Confederation Parkway is Agostino Park and a site for a future school. Given that Confederation Parkway is a primary feeder roadway with relatively high vehicle traffic, a flush-to-grade impressed concrete walkway with associated warning signs would assist pedestrians across Confederation Parkway. A concrete walkway could be installed at the south side of Confederation Parkway and Dufferin Hills Drive which would benefit both visitors to Agostino Park and for the future school site. This traffic calming measure would alert motorists that pedestrians are in the area. The approximate cost to install the flush-to-grade impressed concrete walkway would be \$12,000.00.

As Confederation Parkway is a York Region Transit route, a raised pedestrian crossing as requested in Mr. Dutchak's letter is not recommended, as it is not an approved traffic calming measure for such thoroughfares.

Mr. Dutchak's letter also requests replacing existing all-way stop controls on Confederation Parkway at Westway Crescent, at Ten Oaks Boulevard, and at Belvia Drive with Traffic Circles. Traffic Circles are not recommended due to the high installation costs as well as spacing requirements. Since Confederation Parkway is a Transit Route additional land would also be required.

#### Forest Run Boulevard

Forest Run Boulevard is a feeder roadway with a 50 km/h speed limit, and reduced to 40 km/h in the area of Forest Run Public School. The pavement width is 11.5 metres. There are existing all-way stop controls at two intersections – at Dufferin Hills Drive, and at Ten Oaks Boulevard. There are three existing school crosswalks on Forest Run Boulevard – at Dufferin Hills Drive, at Vanguard Road, and at Ten Oaks Boulevard. Refer to Attachment No. 1 for location.

Staff collected speed and volume data with automatic traffic recorders on Forest Run Boulevard and were conducted on a 24-hour basis. The result of the study is shown in the table below.

Location	Direction	Highest 24-hour volume	Average Speed
Forest Run Boulevard north of Tuscana Boulevard October 22-29, 2007	Northbound	1183	45 km/h
	Southbound	1107	44 km/h
	Total	2290	

The average recorded vehicle speeds are from 44 to 45 km/h, which is below the existing posted 50 km/h speed limit. All recorded volumes are within capacities for feeder roadways. Feeder roadways accommodate traffic volumes not exceeding 8,000 vehicles per day.

A radar speed study was also conducted on Forest Run Boulevard north of Vanguard Road in front of Forest Run Public School on Thursday, November 1, 2007 from 8:00-9:00am and from 4:00-5:00pm. The results of the radar study are shown below.

Location	Time	Direction	Average Speed
Forest Run Boulevard north of Vanguard Road November 1, 2007	8:00-9:00am	Northbound	39 km/h
		Southbound	41 km/h
	4:00-5:00pm	Northbound	43 km/h
		Southbound	42 km/h

The posted speed limit on this section of Forest Run Boulevard is 40 km/h. The average speeds recorded show a good compliance with the posted speed limit.

A request was made for speed humps on Forest Run Boulevard between Novella Road and Belvia Drive, and between Dufferin Hills Drive and Vanguard Road. Based on the Traffic Calming Warrant, speed humps are not recommended on Forest Run Boulevard as vertical traffic calming measures are to be discontinued on feeder roadways.

Mr. Dutchak's letter also requests the installation of a traffic circle at the intersection of Forest Run Boulevard and Derrywood Drive. Traffic Circles are not recommended due to the high installation costs as well as spacing requirements. The corner radii of the intersection would require enlarging to retrofit a traffic circle.

Two other requests for Forest Run Boulevard include the reduction of the speed limit to 30 km/h and the enacting of a Community Safety Zone.

As per the Highway Traffic Act, the lowest permitted posted speed limit is 40 km/h, so the speed limit cannot be further reduced. Community Safety Zones are no longer used within the City of Vaughan and are often not enforced to include the 'double' fined areas. Many other municipalities have not implemented additional zones due to the policing matter with the fines.

#### Ten Oaks Boulevard

Ten Oaks Boulevard is a feeder roadway with a 50 km/h speed limit and a pavement width of 11.5 metres. There are existing all-way stop controls at Forest Run Boulevard and at Confederation Parkway. Refer to Attachment No. 1 for location.

Staff collected speed and volume data with automatic traffic recorders on Ten Oaks Boulevard and were conducted on a 24-hour basis. The result of the study is shown in the table below.

Location	Direction	Highest 24-hour volume	Average Speed
Ten Oaks Boulevard west of Belwood Boulevard October 22-29, 2007	Eastbound	1388	36 km/h
	Westbound	1229	40 km/h
	Total	2617	

The average recorded vehicle speeds are from 36 to 40 km/h, which is well below the existing statutory 50 km/h speed limit. All recorded volumes are within capacities for feeder roadways. Feeder roadways accommodate traffic volumes not exceeding 8,000 vehicles per day.

A radar speed study was also conducted on Ten Oaks Boulevard east of Derrywood Drive on Tuesday, November 6, 2007 from 8:00-9:00am and on Tuesday, November 13, 2007 from 4:00-5:00pm. The results of the radar study are shown below.

Location	Time	Direction	Average Speed
Ten Oaks Boulevard east of Derrywood Drive November 6, 2007 (AM) November 13, 2007 (PM)	8:00-9:00am	Eastbound	41 km/h
		Westbound	43 km/h
	4:00-5:00pm	Eastbound	44 km/h
		Westbound	43 km/h

The statutory speed limit on Ten Oaks Boulevard is 50 km/h. The average speeds recorded show a good compliance with the posted speed limit.

A request was made for the installation of a traffic circle at the intersection of Ten Oaks Boulevard and Derrywood Drive. Traffic Circles are not recommended due to the high installation costs as well as spacing requirements. The corner radii of the intersection would require enlarging to retrofit a traffic circle.

A request was also made for the installation of a raised intersection at Ten Oaks Boulevard and Forest Run Boulevard. This intersection is under an existing all-way stop control. The installation of a raised intersection will not result in a reduction of speeds, given the presence of the all-way stop control. Retrofitted raised intersections are also not recommended due to the high installation costs, ponding issues and relocation of catchbasins, storm and sanitary sewers and residential driveways locations within the intersection.

In addition, Ten Oaks Boulevard is also a York Region Transit Route so vertical traffic calming measures including a raised intersection is not recommended.

#### Dufferin Hills Drive

Dufferin Hills Drive is a feeder roadway with a 40 km/h speed limit and a pavement width of 11.5 metres. There are existing all-way stop controls at Confederation Parkway, at Forecastle Road, and at Forest Run Boulevard. The North Hill Private School is located on the south side of Dufferin Hills Drive at Dufferin Street. Refer to Attachment No. 1 for location.

Staff collected speed and volume data with automatic traffic recorders on Dufferin Hills Drive and were conducted on a 24-hour basis. The result of the study is shown in the table below.

Location	Direction	Highest 24-hour volume	Average Speed
Dufferin Hills Drive east of Benjamin Hood Crescent October 22-29, 2007	Eastbound	1430	42 km/h
	Westbound	1490	42 km/h
	Total	2920	

The average recorded vehicle speeds are 42 km/h, which is in general compliance with the posted 40 km/h speed limit. All recorded volumes are within capacities for feeder roadways. Feeder roadways accommodate traffic volumes not exceeding 8,000 vehicles per day.

A request was made for speed humps on Dufferin Hills Drive between Marathon Avenue and Harmony Road, and between Fremont Street and Forest Run Boulevard. Based on the Traffic Calming Warrant, speed humps are not recommended on Dufferin Hills Drive as vertical traffic calming measures are to be discontinued on feeder roadways.

A request was made for the installation of traffic circles at the intersections of Dufferin Hills Drive and Forest Run Boulevard, and Dufferin Hills Drive and Confederation Parkway. Traffic Circles are not recommended due to the high installation costs as well as spacing requirements. The corner radii at both intersections would need to be enlarged to retrofit traffic circles.

### North Hill Private School Parking

Requests were made regarding the on-street parking activity in front of North Hill Private School, which is located at the southwest corner of Dufferin Street and Dufferin Hills Drive. Suggestions include replacing the parking prohibition signs with stopping prohibition signs, or to widen Dufferin Hills Drive by reducing the width of median islands on Dufferin Hills Drive in front of North Hill Private School. The existing parking prohibitions are from 7:30-9:30am and from 4:00-6:00pm.

Staff observed parking activity in front of the school on Wednesday, November 7, 2007 from 8:00-9:00am, from 11:00am-12:00pm, and from 15:00-16:00pm. Observations showed parking activity on the south side of Dufferin Hills Drive during the morning and afternoon observation periods.

Bylaw Enforcement staff have been notified of the parking concerns regularly patrol to enforce prohibitions; however the problem continues to persist. Replacing the parking prohibitions with stopping prohibitions would not likely stop the parking activity.

Dufferin Hill Drive in the section between Dufferin Street and Marathon Avenue is directionally separated by a raised centre median island. The raised island is 3.0 metres wide with landscaping. There is 7.0m of pavement width for eastbound traffic and 7.0m of pavement width for westbound traffic. The reduction of the median island would be problematic in that it would create issues with lane designations and intersection design.

The presence of parked vehicles restricts sight lines from the school driveway and the adjacent intersections. This concern is made more critical with the presence of parents walking children across the street within the same area.

It is recommended that the existing parking prohibitions remain as-is, and the existing median island not be reduced in width.

### Other Traffic-Related Requests

There are a number of other traffic-related requests made in Mr. Dutchak's letter which is addressed below.

#### *Install painted Ladder-style crosswalk markings at all areas where crosswalks exist.*

There are three existing school crosswalks on Forest Run Boulevard – at Ten Oaks Boulevard, at Vanguard Road, and at Dufferin Hills Drive. Installation of 'ladder-style' crosswalk markings at these three locations could be introduced as a pilot project. This type of marking can be applied by the use of paint or durable marking. The durable marking has initial high cost and higher life expectancy (8 years), but will save money over the re-tracing of paint each year. The approximate cost to install the special crosswalk markings at each location is \$800.00 for paint (over eight years, total \$6,400.00) or for durable (\$4,500.00 per location).

#### *Install drop curbs for all crosswalk locations.*

The three crosswalks on Forest Run Boulevard were investigated and drop curbs exist at all three locations.

#### *Install Stop Ahead Signing (OTM Book 5, Wb-1) on approaches to main intersections.*

Installing Wb-1 Stop Ahead Signs is not recommended as the Ontario Traffic Manual states these signs should be used for new stop sign installations, or for high volume urban city streets where a driver could miss seeing the stop sign. There are no sight line problems viewing stop signs in this area.

#### *Replace all regulatory 50 km/h signs with 40 km/h signs.*

Not recommended as the speed studies conducted do not indicate a speeding concern, and the existing speed limits are appropriate for the study roads.

Use Durable pavement marking material for all stop blocks and crosswalk markings.

Not recommended as the installation costs for Durable markings are high. Stop bars and crosswalk markings are repainted yearly. The City is working on a program to apply durable markings at signalized intersections and school crossing guard locations.

Install baffles or bollards at the ends of pedestrian pass-through walkways to alert them to the presence of cross traffic.

Installation of these devices would have installation and maintenance costs. The City has not installed such devices elsewhere at the end of a pedestrian walkway.

Install Pedestrian warning signs (OTM Book 5, Wc-7) directed to motorists.

The Wc-7 Pedestrians Ahead sign can be installed in advance of park areas where pedestrians are noted crossing the street. Staff have confirmed Pedestrian Ahead warning signs are already installed on Confederation Parkway in advance of Agostino Park.

All these noted roadways could accommodate alternative traffic calming measures such as curb bump-outs, medians, chicanes or painted road narrowings. However, a neighbourhood traffic committee is required to develop such a plan and bring it forward for staff's review and Council's approval under the pavement policy.

**Relationship to Vaughan Vision 2007**

This traffic study is consistent with Vaughan Vision 2007 as to ensure enhanced safety standards are incorporated in community designs (1.1.2).

This report is consistent with the priorities previously set by Council.

**Regional Implications**

Not Applicable.

**Conclusion**

Based on staff's review, it is recommended that this report be received for information.

**Attachments**

1. Location Map

**Report prepared by:**

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Mike Dokman, Supervisor, Traffic Engineering, ext. 3118

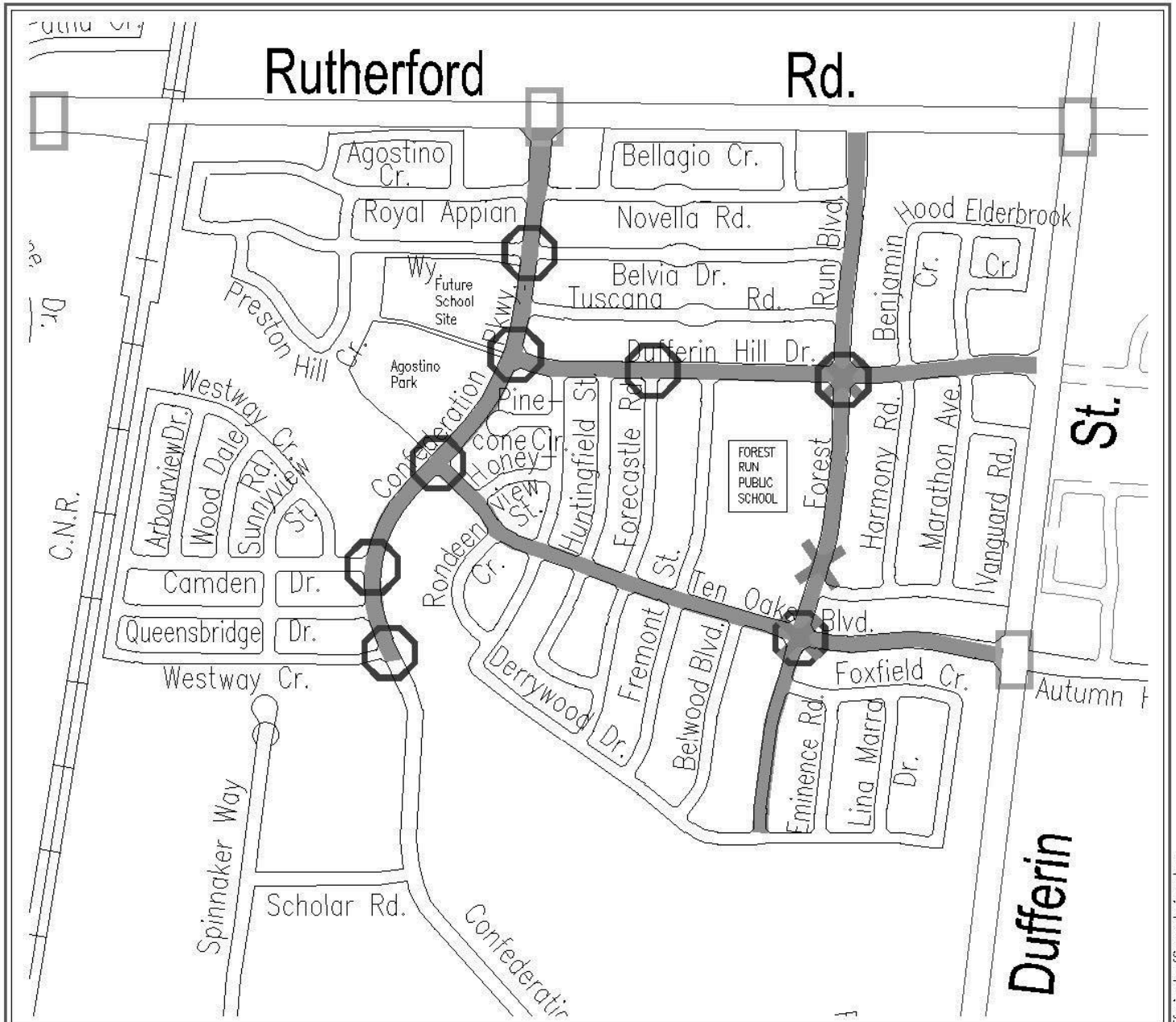
Respectfully submitted,

Bill Robinson, P. Eng.  
Commissioner of Engineering and Public Works

Gary P. Carroll, P. Eng.  
Director of Engineering Services





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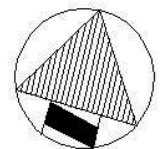
# ATTACHMENT No. 1



## FOREST RUN BLVD, TEN OAKS BLVD AND DUFFERIN HILL DRIVE TRAFFIC REVIEW

### LEGEND

-  SUBJECT ROADS UNDER REVIEW
-  EXISTING SUPERVISED SCHOOL CROSSING
-  EXISTING TRAFFIC SIGNALS
-  EXISTING ALLWAY STOP CONTROL



NOT TO SCALE