



## STAFF REPORT ACTION REQUIRED

### **Pedestrian Refuge Island: Victoria Park Avenue at Terraview Boulevard/Farm Greenway**

<b>Date:</b>	February 10, 2014
<b>To:</b>	Public Works & Infrastructure Committee
<b>From:</b>	General Manager, Transportation Services
<b>Wards:</b>	Ward 40 – Scarborough-Agincourt, Ward 34 – Don Valley East
<b>Reference Number:</b>	P:\2014\Cluster B\TRA\Scarborough District\pw1401.doc

### **SUMMARY**

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This report is to obtain approval for the removal of the closed pedestrian refuge island at the intersection of Victoria Park Avenue and Terraview Boulevard/Farm Greenway.

Traffic studies reveal that the warrant or technical justification for the pedestrian refuge island is no longer met at this location since it fails the current environmental criteria for the number of lanes.

This report is submitted to Public Works and Infrastructure Committee as the matter is a shared boundary issue between North York Community Council and Scarborough Community Council.

### **RECOMMENDATIONS**

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#### **The General Manager, Transportation Services recommends that:**

1. City Council approve the removal of the pedestrian refuge island on Victoria Park Avenue at Terraview Boulevard/Farm Greenway.
2. City Council, pursuant to the City of Toronto Act 2006, authorize the appropriate City officials to prepare the necessary Road Alteration By-law.
3. City Council not approve an installation of Traffic Control Signals on Victoria Park Avenue and Terraview Boulevard/Farm Greenway.

## **Financial Impact**

The financial cost of removing the pedestrian refuge island would be approximately \$10,000. Funding is available within the 2014 Approved Capital Budget and 2015-2023 Approved Capital Plan for Transportation Services (Safety and Operational Improvements CTP813-03).

Should City Council approve the installation of traffic control signals at this location, the cost would be approximately \$150,000; however, funding is not available in the 2014 Approved Capital Budget and 2015-2023 Approved Capital Plan for Transportation Services (New Traffic Control Signals CTP714-01).

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **ISSUE BACKGROUND**

Due to public requests to study the installation of traffic control signals at the intersection of Victoria Park Avenue and Terraview Boulevard/Farm Greenway, Transportation Services staff reviewed the feasibility of removing or retaining the pedestrian refuge island (PRI) and/or upgrading this location to a higher form of traffic control (signalized intersection). A pedestrian refuge island serves as a tool to shorten pedestrian crossings of streets where no traffic control is provided.

The policy or technical criteria for the usage of a PRI is currently limited to a maximum five-lane cross-section roadway being approximately 16.4 metres wide. Victoria Park Avenue at Terraview Boulevard/Farm Greenway is a seven-lane cross-section roadway including a northbound left-turn lane and therefore exceeds the maximum width. During the morning peak traffic period, queuing often occurs on the southbound lanes as a result of the traffic control signal located at York Mills Road approximately 163 metres south of Terraview Boulevard/Farm Greenway. Pedestrians can be hidden from view by these queued vehicles creating a collision potential. This PRI no longer meets current City of Toronto guidelines and should be removed. The PRI was closed on February 5, 2014. The TTC has agreed to a request from this Division to remove the two transit stops that generate most of the pedestrian traffic at this PRI.

## **COMMENTS**

The following characteristics describe the location of the pedestrian refuge island on Victoria Park Avenue and Terraview Boulevard/Farm Greenway:

- Victoria Park Avenue is a seven-lane major arterial roadway.
- The seven-lane cross-section incorporates three southbound lanes plus a southbound bus bay taper, a northbound left-turn lane and three northbound lanes plus a northbound bus bay taper.
- Victoria Park Avenue has a posted speed limit of 60 kilometres per hour (km/h), an average operating speed of approximately 73 km/h, and a daily traffic volume of approximately 54,856 vehicles per day (vpd) as measured between Terraview Boulevard and Highway 401.
- A pedestrian refuge island (PRI) is currently located on Victoria Park Avenue at Terraview Boulevard/Farm Greenway, just south of Terraview Boulevard.

- Toronto Transit Commission (TTC) near side bus stops for both directions.
- Traffic control signals are located at Victoria Park Avenue at York Mills Road, 163 metres south of Terraview Boulevard/Farm Greenway and 267 metres north of the intersection in question at the eastbound Highway 401 off-ramp.
- Sidewalks are located on both sides of Victoria Park Avenue.
- The land uses on this section of Victoria Park Avenue are primarily residential and institutional, comprising townhouses, apartment buildings and places of worship.

### **Pedestrian Crossing Protection Warrant Studies**

Transportation Services staff conducted a Pedestrian Crossing Protection Warrant Study at the pedestrian refuge island on Victoria Park Avenue and Terraview Boulevard/Farm Greenway. The Study provided an assessment of the need for a signalized pedestrian crossover based on crossing pedestrian volumes and delays and are expressed in terms of percentages. The 100% threshold is approximately 200 pedestrians in an eight-hour period. Using traffic volumes recorded over the peak eight hours of a typical weekday, the following results were obtained:

<b>Pedestrian Crossover Warrant</b>	<b>Compliance Level</b>	<b>Threshold</b>
	<b>Wednesday, April 18, 2012</b>	
<b>Pedestrian Volume</b>	57%	100%
<b>Pedestrian Delays</b>	64%	100%

In addition, Transportation Services staff conducted a Traffic Control Signal Warrant Study at the intersection of Victoria Park Avenue and Terraview Boulevard/Farm Greenway. The Study provided an assessment of the need for traffic control signals based on vehicle volumes and delays to cross traffic (including pedestrians) and are expressed in terms of percentages so as to be comparable over time. For traffic control signals to be numerically justified, one of the "Minimum Vehicular Volume" or "Delay to Cross Traffic" or "Collision Hazard" warrants must be 100 % satisfied or both the "Minimum Vehicular Volume" and "Delay to Cross Traffic" must be at least 80% satisfied.

<b>Traffic Control Signal Warrant</b>	<b>Tuesday, January 19, 2010</b>	<b>Wednesday, April 18, 2012</b>	<b>Threshold</b>	
Minimum Vehicular Volume	66 %	68 %	100%	both 80%
Delay to Cross Traffic	61 %	48 %	100%	
Collision Hazard	27 %	20%	100%	

As outlined in the above tables, none of the warrant thresholds is met. The installation of a pedestrian crossover and/or upgrading the current pedestrian refuge island to traffic control signals cannot be justified. In addition, the spacing of 163 metres to the signals at York Mills Road could cause gridlock due to existing vehicle queues. Such gridlock might not be able to be mitigated by traffic control signal co-ordination because of the high traffic volumes.

## Collision History

A review of the Toronto Police Service collision records for the five-year period ending December 31, 2012 at the PRI is summarised below.

Five-Year Collision Information	Number of Reported Collisions					
	2008	2009	2010	2011	2012	Total
Collisions Potentially Preventable by the Installation of Traffic Control Signals	1	0	2	2	1	6
Collisions Involving Pedestrians Crossing Victoria Park Avenue at PRI	0	0	2	1	1	4

This collision record is not indicative of a historical safety problem at this site requiring traffic control signals to be installed, over this five-year period there were four collisions involving pedestrians; one with minimal injuries, two with minor injuries, and one with major injuries.

## Conclusion

It is recommended that the Pedestrian Refuge Island on Victoria Park Avenue and Terraview Boulevard/Farm Greenway be removed and that traffic control signals not be installed at the intersection of Victoria Park Avenue and Terraview Boulevard to replace the PRI.

## CONTACT

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## SIGNATURE

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Stephen Buckley  
General Manager, Transportation Services, Scarborough District

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## ATTACHMENTS

1. Appendix 1- Proposed Highway Alterations
2. Location Plan (Pedestrian Refuge Island, Victoria Park Avenue at Terraview Boulevard/Farm Greenway)

## Appendix 1 – Proposed Highway Alterations

<b>Ward</b>	<b>Street</b>	<b>At</b>	<b>To</b>	<b>Description of Highway Alteration</b>	<b>Rationale</b>
40 & 34	Victoria Park Avenue	Terraview Boulevard/Farm Greenway		Remove Pedestrian Refuge Island	Safety and Operational Improvement