

Black Creek Drive and Lawrence Avenue West

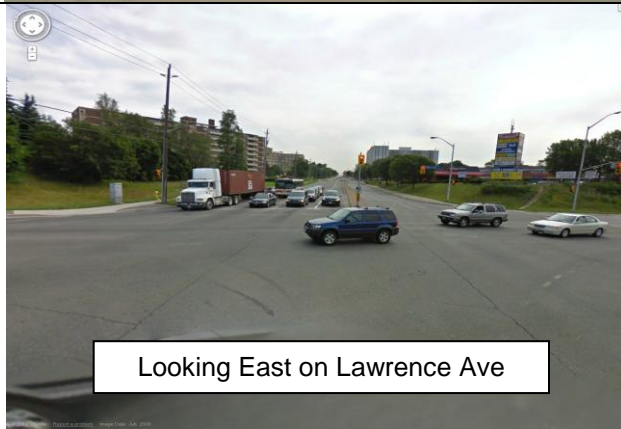
The intersection of Black Creek Drive and Lawrence Avenue West is located in the Etobicoke-York District. It is the first at grade signalized intersection on Black Creek Drive from Highway 400 southbound. The existing speed limit on Black Creek Dr approaching the intersection is 70 km/h. Lawrence Avenue, east and west of Black Creek Dr, operates under restricted traffic flow. The posted speed limit approaching the intersection is 60 km/h.



Looking North on Black Creek Dr



Looking South on Black Creek Dr



Looking East on Lawrence Ave



Looking West on Lawrence Ave

Discussion of Issues

This signal is equipped with the SCOOT system. Southbound and northbound left turn signals are fully protected. Traffic signals were on local control for the last couple of months and noted significant delays for northbound and southbound traffic during the rush hours. Since the signals have been reconnected to SCOOT, observations indicate delays for northbound traffic.

The intersection currently experiences significant delay for southbound traffic during morning and afternoon peak periods, typically for southbound left turn movement.

History of Actions / Background

District requested to Urban Traffic Control Systems to add extra green time to southbound left turn movement during morning rush hours. We identified congestion and delays along westbound through/right turning in the afternoon rush hours as well.

Data and Analysis

Traffic Volume Information – 8 Hour Summary

Study Date	Northbound				Eastbound				Southbound				Westbound			
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total
May 17, 2010	159	10968	745	11872	668	4876	234	5798	2279	10123	393	12796	1082	5762	5595	12439

Total 8 hour vehicle volume: 42904

Total 24 hour vehicle volume: 85808

Note: A factor of 2 was used to convert the 8 hr total to a 24 hour total

Options for Consideration & Potential Benefits

Actions Implemented as a result of the review

- Reallocate green time extensions (SCOOT) to the southbound through and southbound left turns in the morning peak as opposed to the previous allocation of green time to the northbound and southbound through

Near term options

- Co-ordination reviews of the traffic signals on Lawrence Avenue West from Black Creek Drive to Plimico/Firehall ACC. This should provide relief to the back up on Lawrence Ave West during morning and afternoon rush hours.
- Existing westbound left turn setback loop (located at 60m from the stop bar) needs to be replaced or supplemented with 9m setback loop. It will help to improve level of service for westbound left turning movement.
- Amending the signal to operate semi actuated with pedestrian push buttons. This will reduce the pedestrian minimum green time requirements and limit this to occasions where pedestrians want to cross.)

Longer Term options

- Implementation of dual southbound dual left turn lanes. This should provide relief to the southbound through and left turning traffic at Black Creek Dr and Lawrence Ave West. This will require the widening and realignment of the intersection, including the relocation of utilities.
- Extension of westbound right turn lane from Goldcrest Blvd to Demarco Blvd. This should reduce congestion and delays to westbound right turn movement and some relief to westbound through traffic in afternoon rush hours. This will require the relocation of the curb on the north side of the road and the relocation of utilities.

Costs	Funding Source (Operating/Capital)
Immediate	2012 Operating Budget

Near Term	2013 Operating Budget
Mid Term	N/A
Long Term	Capital