

Unsignalized Intersection Analysis in Metropolitan Toronto

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ABSTRACT

This paper presents the results to date of the Metropolitan Toronto Transportation Department's efforts to develop acceptable procedures for the analysis of the operation of unsignalized intersections in Metro Toronto.

The Traffic Planning Branch of the Metro Toronto Transportation Department is responsible for the evaluation of the impacts of proposed development on the Metropolitan road network. To aid in its evaluation of development proposals, the Traffic Planning Branch is in the process of establishing guidelines for the preparation of the Transportation Impact Studies that are often submitted in support of developments. This has necessitated the investigation of methodologies that are acceptable to Metro Transportation for the analysis of development-related impacts. One of the methodologies under consideration is the procedure for analyzing the operation of unsignalized intersections.

Initially, the development of an acceptable methodology concentrated on reviewing the two methods that Metro Transportation currently accepts for unsignalized intersection analysis:

1. HCM Chapter 10 methodology; and
2. Field gap studies

The review of these methodologies consulted three sources of information:

- 1) A literature search was conducted using the Transportation Research Information Search (TRIS) database and several articles/papers that dealt with unsignalized intersection capacity and analysis were identified for review;
- 2) A Current Practices Survey was distributed to other local municipal reviewing agencies and several major transportation engineering consulting firms to solicit information concerning the current practices for the evaluation of unsignalized intersection operation in Metro Toronto; and
- 3) Field studies were conducted at 12 sites across Metro Toronto on roads with 4-lane cross-sections to provide a sample of driver behaviour in Metro Toronto.

