# 11
## TRAFFIC SIGNAL ASSESSMENT
## MAJOR MACKENZIE DRIVE AT THE ROWENA DEVELOPMENT ACCESS
## TOWN OF RICHMOND HILL

***(Regional Council at its meeting on October 16, 2003, amended the foregoing Report to provide that a traffic control signal at an access onto Major Mackenzie Drive (Y.R. 25) from the proposed Rowena Commercial Development be installed at this time at the cost of the developer.)***

**The Transportation and Works Committee recommends:**

**1. The following report, September 18, 2003, from the Commissioner of Transportation and Works be received; and**

**2. The matter be deferred to the January 2004 Transportation and Works Committee meeting.**

## 1. RECOMMENDATIONS

It is recommended that:

1. A traffic control signal at an access onto Major Mackenzie Drive (Y.R. 25) from the proposed Rowena Commercial Development not be installed at this time.

2. The Regional Clerk forward a copy of this report to the Clerk of the Town of Richmond Hill.

## 2. PURPOSE

This report presents the results of a recent staff review of a Traffic Impact Study (TIS) submitted by Cansult Limited on behalf of their client Rowena Development Corporation. Specifically, a recommendation contained within the report recommending the installation of traffic signals at an access onto Major Mackenzie Drive from the proposed Rowena Commercial Development.

## 3. BACKGROUND

Regional staff received a TIS submitted by Cansult Limited on behalf of their client Rowena Development Corporation with reference to a proposed commercial development to be located in the northeast quadrant of the intersection of Major Mackenzie Drive and Forestwood Street in the Town of Richmond Hill. The TIS proposes three access points onto Major Mackenzie Drive and one point of access onto Forestwood Street for the proposed commercial Development. One of the proposed access points onto Major Mackenzie Drive is recommended for signalization

(*see Attachment 1)*.

## 4. ANALYSIS AND OPTIONS

Major Mackenzie Drive in this area is a five-lane urban cross section, comprising of two through lanes in each direction with a continuous centre lane left turn lane. There are existing traffic signals located at Leslie Street and at Forestwood Street. The average volume of traffic on Major Mackenzie Drive is 49,000 vehicles per day (*see Attachment 2)*.

The proposal is comprised of 10,923 square metres of commercial development. Primary access to the site will be by means of a full moves intersection onto Major Mackenzie Drive, located approximately equidistant between Forestwood Street and Leslie Street. Secondary site access is proposed via two right-in, right-out accesses onto Major Mackenzie Drive. One is located 90 metres from Forestwood Street and the other 100 metres from Leslie Street. A fourth access is full moves access located on Forestwood Street. The TIS recommends that the full moves access onto Major Mackenzie Drive be signalized.

### 4.1 TIS Assessment of the Need for Traffic Signals

The TIS identified that traffic signals did not meet the signal warrants based upon the estimated 2007 traffic that would be generated by the proposed development and the traffic on Major Mackenzie Drive. However, that traffic signals should be considered to resolve the delay, which would be experienced by vehicles turning left from the development onto Major Mackenzie Drive.

### 4.2 Regional Policy

The installation of non-warranted traffic signals is of a concern to staff and the public. It is the Region's policy to install traffic signals only if the warrant criteria are met.

#### 4.2.1 Non-Warranted Traffic Signals

Installing traffic signals at locations that do not yet meet traffic signal warrants can result in a reduction in overall intersection safety. Specifically, the installation of traffic signals increases the occurrence of certain types of collisions. Rear-end collisions on the major streets, for example, can increase by as much as 60% after the installation of traffic signals. Additionally, the average delay to side street traffic is often substantially increased during periods of the day outside of peak hours. This increased delay can result in driver frustration and non-compliance with the traffic signal indications.

#### 4.2.2 Traffic Signal Spacing

Ideally, if traffic signals are warranted, they should be spaced approximately 400 metres apart. This spacing allows for co-ordination/progression along the major street and the provision of storage for vehicles queuing between intersections. The spacing between the proposed traffic signals and existing traffic signals at Leslie Street and at Forestwood Street is 200 metres.

#### 4.2.3 Other Considerations

The proposed development proposes a full moves access directly onto Forestwood Street. The intersection of Major Mackenzie Drive at Forestwood Drive is currently signalized and has a spare capacity that can be used to satisfy the development's need to have left-in and left-out access.

## 5. FINANCIAL IMPLICATIONS

There are no financial implications to the Region.

## 6. LOCAL MUNICIPAL IMPACT

There are no immediate impacts to the area municipality, other than the impacts mentioned above, summarized as follows:

- If signals are not installed, there may be delays in departing from the site of development at certain peak periods, leading to an increased use of Forestwood Street during those periods.

- If signals are installed there will be impeded traffic flow and reduced traffic safety on Major Mackenzie Drive, due to substandard signal spacing.

## 7. CONCLUSION

Staff have completed an assessment for the need of traffic signals at an access onto Major Mackenzie Drive from the proposed Rowena Commercial Development that was recommended as part of the TIS submitted for this development.

The conclusions of the assessment confirmed that a warrant for traffic signals is not met.

The Senior Management Group has reviewed this report.

*(A copy of the attachments referred to in the foregoing has been forwarded to each Member of Council with the October 1, 2003 Transportation and Works Committee agenda and a copy thereof is on file in the Office of the Regional Clerk.)*