

COMMITTEE OF THE WHOLE MAY 5, 2008

TRAFFIC STUDY REVIEW OF CLARENCE STREET BETWEEN MEETING HOUSE ROAD AND RUTHERFORD ROAD

Recommendation

The Commissioner of Engineering and Public Works recommends:

1. That this report on staff's findings regarding the traffic study review on Clarence Street be received.
2. That York Regional Police be requested to enforce the existing speed limits on Clarence Street.

Economic Impact

None.

Communications Plan

The local Councillor will inform residents of the decision of Council based on the findings of the traffic studies.

Purpose

To report on the results of traffic study review for Clarence Street between Meeting House Road and Rutherford Road.

Background - Analysis and Options

At its meeting on October 22, 2007, Council directed:

- “1. That appropriate staff be directed to update the traffic study review of Clarence Street between Meeting House Road and Rutherford Road in light of any relevant changes in circumstances since the spring of 2004, when data which formed the basis of the report was first collected; and**
- 2. Update traffic study review be brought forward for consideration by the Committee of the Whole on May 5, 2008.”**

Clarence Street is classified in OPA 600 as a minor arterial road. The existing speed limit on Clarence Street is 40 km/h from Woodbridge Avenue to approximately 540 metres north of Mounsey Street and the speed limit is 50 km/h from that point to Rutherford Road. Existing all-way stop controls are on Clarence Street at the intersections of Meeting House Road, Modesto Gardens, Wycliffe Avenue, Thomson Creek Boulevard/Woburn Drive, and Avdell Avenue/Crofters Road.

Clarence Street operates as a two-lane roadway with a paved driving surface of 7.0 metres and a 27.0 metre right-of-way. There is an existing speed hump on Clarence Street located approximately 100 metres south of Mounsey Street. The speed hump was installed as part of the Woodbridge Core Traffic Committee.

There are two pedestrian crossing areas on Clarence Street north of Mounsey Street to accommodate golfers and facility workers. The two existing pedestrian crossing areas in the vicinity of the golf course are located as follows: (Refer to Attachment No. 1).

- Approximately 110 metres north of Mounsey Street.
- Approximately 200 metres north of Mounsey Street.

Speed and Volume Data

Utilizing the use of Automated Traffic Recorders (ATR's), staff collected speed and volume data from March 15, 2008 to March 20, 2008. The data covered a 24-hour time period and it is compared to data from Spring 2004 which is summarized below.

| LOCATION | DIRECTION | SPEED LIMIT | AVERAGE SPEED | HIGHEST 24 HOUR VOLUME |
|---|------------|-------------|-----------------------------|-------------------------|
| Between Thomson Creek Blvd/Woburn Dr and Avdell Ave/Crofters Rd | Southbound | 50 km/h | 59 km/h (60 km/h) | 2,965 (2,547) |
| Between Thomson Creek Blvd/Woburn Dr and Avdell Ave/Crofters Rd | Northbound | 50 km/h | 56 km/h (56 km/h) | 2,704 (2,498) |
| Between Wycliffe Ave and Thomson Creek Blvd/Woburn Dr | Southbound | 50 km/h | 61 km/h (61 km/h) | 2,930 (2,337) |
| Between Wycliffe Ave and Thomson Creek Blvd/Woburn Dr | Northbound | 50 km/h | 55 km/h (56 km/h) | 2,795 (2,449) |
| Between Modesto Gdns and Wycliffe Ave | Southbound | 50 km/h | 53 km/h (56 km/h) | 2,777 (2,070) |
| Between Modesto Gdns and Wycliffe Ave | Northbound | 50 km/h | 53 km/h (54 km/h) | 2,552 (2,204) |
| North of Mounsey St | Southbound | 40 Km/h | 60 km/h (50 km/h) | 2,778 (2,009) |
| North of Mounsey St | Northbound | 40 Km/h | 59 km/h (54 km/h) | 2,563 (2,174) |

Note: the first number indicates previous study results from March 29, 2004 to April 2, 2004 and the bold number in brackets represents study results from March 15, 2008 to March 20, 2008.

Clarence Street functions as a minor arterial roadway with a limited number of residential frontages and they are located north of Modesto Gardens, and represents the main north-south link for the residential developments between Woodbridge Avenue and Rutherford Road. The Board of Trade Golf Course is located on the east side of the roadway, north of Mounsey Street.

The average speeds collected on Clarence Street from March 17, 2008 to March 20, 2008, between Rutherford Road to Modesto Gardens were similar as the data from year 2004. However, the collected speeds north of Mounsey Street indicates that the average speed still exceeds the speed limit by approximately 10-14 km/h. Based on the above information, one of the warrants for the installation of speed humps (i.e. average speed exceeds the posted speed by 10 km/h or more) on this section of Clarence Street is met.

However, as Clarence Street is both an arterial roadway and an emergency vehicle response route, the City's criteria for speed humps would preclude their installation on this section of roadway.

The volumes collected on Clarence Street over a 24-hour period from March 17, 2008 to March 20, 2008 range from 5,300 to 5,700 vehicles for both the northbound and southbound directions. The volumes have decreased by 800 to 1,000 vehicles for both the northbound and southbound directions compared with the highest volumes in March, 2004. The traffic volumes collected over a 24-hour period are well within a minor arterial road capacity. According to the Geometric Design Guide for Canadian Roads, Arterial Roads can accommodate 8,000 vehicles per day.

Fire & Rescue Services

As noted previously, Clarence Street has been identified as a primary response route by Fire & Rescue Services for their vehicles traveling through Woodbridge. Accordingly, they do not support the installation of additional speed humps on Clarence Street.

Traffic Counts Data

Staff conducted turning movement counts at Clarence Street and Wycliffe Avenue on March 19, 2008, at Clarence Street and Thomson Creek Boulevard/Woburn Drive on March 20, 2008, and at Clarence Street and Avdell Avenue/Crofters Road on March 26, 2008 during the highest eight-hour peak travel periods. The times the counts were conducted were from 7:00 am to 9:00 am, from 11:00 am to 2:00 pm and from 3:00 pm to 6:00 pm. The days of the traffic study the weather were cloudy and overcast. The results of the study are outlined below.

Clarence Street and Wycliffe Avenue

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|--|--|
| Warrant 1 Minimum Vehicular Volumes | Part A – All Approaches – 69% (50%) Part B – Minor Street Approaches – 62% (43%) Overall Percent Met – 62% (43%) |
| Warrant 2 Delay to Cross Traffic | Part A – Major Street Both Approaches – 55% (39%) Part B – Traffic Crossing Major Street – 63% (38%) Overall Percent Met – 55% (38%) |
| Warrant 3 Accident Experience | There were 0 vehicle collisions over a 3-year time period that would be susceptible to correction by the installation of a traffic signal. The fulfilled warrant percent is 0% |

Clarence Street and Thomson Creek Boulevard/Woburn Drive

| | |
|--|--|
| Warrant 1 Minimum Vehicular Volumes | Part A – All Approaches – 71% (61%) Part B – Minor Street Approaches – 77% (66%) Overall Percent Met – 71% (66%) |
| Warrant 2 Delay to Cross Traffic | Part A – Major Street Both Approaches – 54% (45%) Part B – Traffic Crossing Major Street – 80% (75%) Overall Percent Met – 54% (45%) |
| Warrant 3 Accident Experience | There were 0 vehicle collisions over a 3-year time period that would be susceptible to correction by the installation of a traffic signal. The fulfilled warrant percent is 0% |

Clarence Street and Avdell Avenue/Crofters Road

| | |
|--|---|
| Warrant 1 Minimum Vehicular Volumes | Part A – All Approaches – 84% (81%) Part B – Minor Street Approaches – 82% (85%) Overall Percent Met – 71% (81%) |
|--|---|

| | |
|-------------------------------------|--|
| Warrant 2 Delay to Cross Traffic | Part A – Major Street Both Approaches – 67% (64%) Part B – Traffic Crossing Major Street – 90% (90%) Overall Percent Met – 67% (64%) |
| Warrant 3 Accident Experience | There were 0 vehicle collisions over a 3-year time period that would be susceptible to correction by the installation of a traffic signal. The fulfilled warrant percent is 0% |

Note: the first number indicates previous study results from year 2004 and the bold number in brackets represents study results from March, 2008.

Based on the technical requirements of the Provincial Traffic Signal Warrant, the warrants for the installation of a traffic signal at the above noted intersections are not met. Two or more of the above Warrants 1, 2, and 3 are not satisfied at 80% or more and none of the individual warrants are satisfied at 100%. In most section of the warrant the percentages have decreased.

There are no sight distance restrictions noted at the above intersections.

Accident History

Staff reviewed the collision history on Clarence Street from Meeting House Road to Rutherford Road. There have been six reportable accidents from 2003 to 2006 (eighteen reportable accidents from 1999 to 2003 as mentioned in the 2004 report). There was one accident at the intersection of Clarence Street and Avdell Avenue (total of five intersection accident reports from 1999 – 2003 as mentioned in the 2004 report). The remaining five accidents were not intersection related. A total of four reported accidents were a result of poor weather conditions, and one accident involved single vehicle collisions. There as no reported accidents near the Board of Trade Golf Course.

Sign Investigation

Staff conducted a sign inventory on Clarence Street between Meeting House Road and Rutherford Road and found that the proper signage has been installed on the roadway.

The existing speed limit on Clarence Street is 40 km/h from Woodbridge Avenue to approximately 540 metres north of Mounsey Street, and the speed limit is 50 km/h from that point to Rutherford Road. The required signage for 40 km/h speed limit has been installed as well as 50 km/h speed limit signs.

Existing all-way stop controls on Clarence Street at the intersections of Meeting House Road, Modesto Gardens, Wycliffe Avenue, Thomson Creek Boulevard/Woburn Drive, and Avdell Avenue/Crofters Road have been properly signed and marked.

There is an existing supervised school crossing guard located at the Clarence Street and Thomson Creek Boulevard/Woburn Drive intersection and the location has been properly identified.

There is a reverse curve located through the middle section of Clarence Street that has been properly identified. A “Reverse Curve” sign for the northbound direction is located well in advance of the curve and there is a “Checkerboard” (One Direction) sign for the southbound direction with a flashing beacon.

There are eight warning signs on Clarence Street informing traffic to the potential crossing of golfers near the Board of Trade Golf Course; seven “Watch for Golfers” warning signs and one “Pedestrians Ahead” warning sign.

Relationship to Vaughan Vision 2020

Enhance and Ensure Community Safety, Health & Wellness – To advocate for, protect and enhance community safety, health and wellness through education, design and enforcement.

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

Regional Implications

Not Applicable.

Conclusion

This report details staff's finding of a traffic safety review for Clarence Street between Meeting House Road and Rutherford Road. Clarence Street accommodates a large volume of traffic and the operating speeds on the roadway are in excess of the posted speed. Specifically, there is a low level of compliance with the posted speed limit north of Mounsey Street, where the Board of Trade Golf Course is located.

Based on the high number (approximately 300 to 400 per day per Board of Trade records) of golfers and golf course maintenance staff crossing Clarence Street in the vicinity of Board of Trade Golf Course, the recorded vehicle speeds on Clarence Street and the average daily traffic volumes on Clarence Street, some form of traffic control or traffic calming measures in the area of the two golfer crossing areas for the Board of Trade Golf Course would be beneficial. Staff will identify possible measures and discuss the matter further with the Board of Trade. A future report on the results of the further review and discussions will be brought to a future Committee of the Whole meeting.

It is recommended that York Regional Police be requested to enforce the speed limits on Clarence Street through the study area.

Attachments

1. Location Map

Report prepared by:

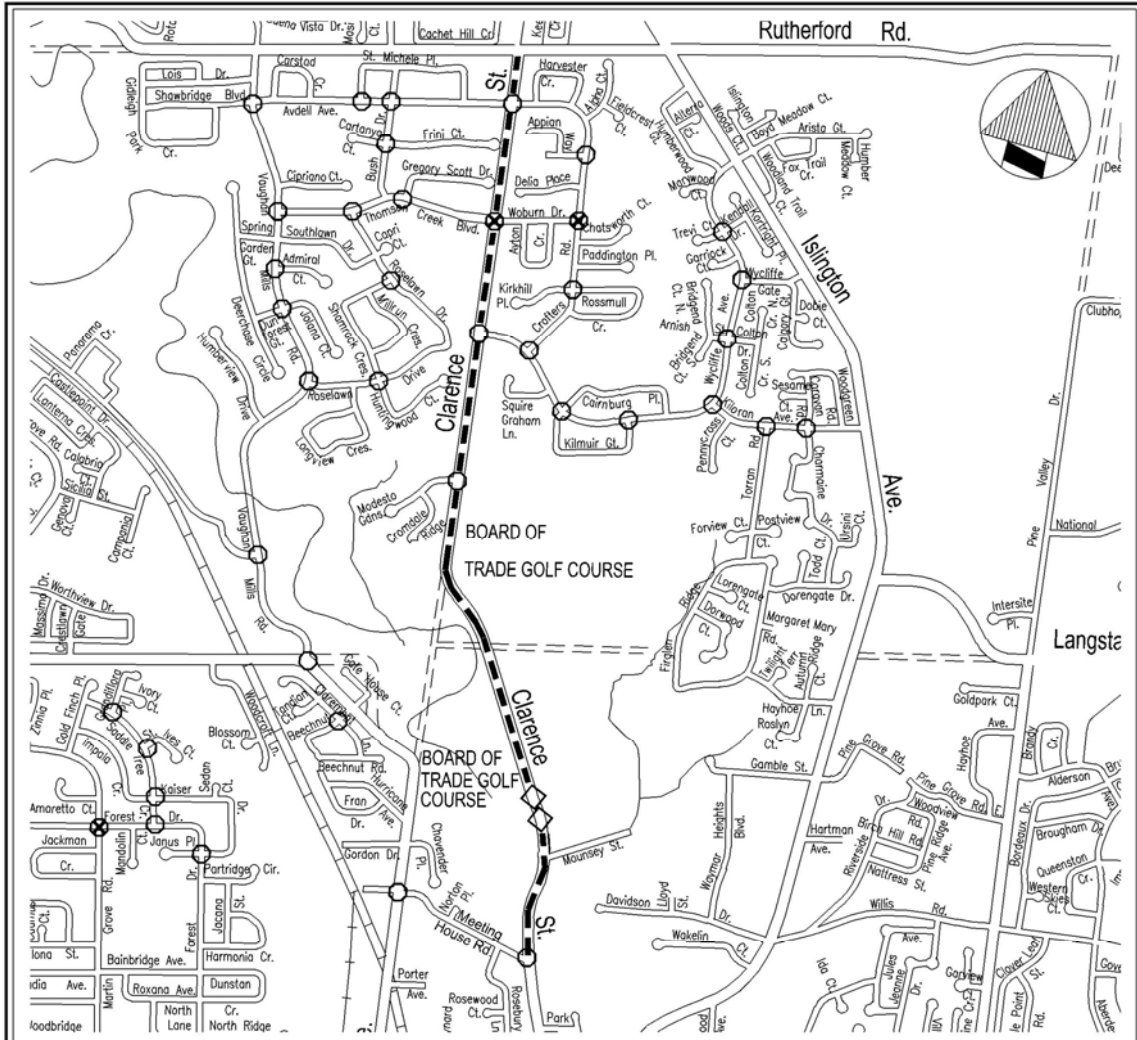
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Respectfully submitted,

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Commissioner of Engineering and Public Works
PT:mc

Mike Dokman, C.E.T.
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ATTACHMENT No. 1



TRAFFIC REVIEW OF CLARENCE STREET

LEGEND

- ■ ■ ROADWAY UNDER REVIEW
- EXISTING TRAFFIC SIGNALS
- EXISTING ALL-WAY STOP CONTROL
- ✕ EXISTING SCHOOL CROSSING GUARD
- ◇ PEDESTRIAN (GOLFERS) CROSSING

NOT TO SCALE