



JOHNSTON ROAD

TRAFFIC STUDY

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Prepared By: Traffic Investigations and Surveys Unit
Safety and Traffic Services Division
Transportation and Parking Operations Branch
Department of Public Works and Services

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1.0 Background

The Planning, Environment and Transit Department is currently undertaking a Land Use Study for the railway marshalling yards property located on the north side of the section of Johnston Road east of the Albion Road.

As part of this project, Genivar Engineering Consultants is undertaking a “Traffic Impact Study”. This Study will include the following works:

- A review of the "Level of Service" at existing intersections with traffic control signals in the vicinity of Johnston Road. This review will form the basis for various land use scenarios and proposed network modifications;
- A review of the "cut-through" traffic movements on the street, including possible near term and medium term solutions to this traffic concern;
- Review the ability of the transportation network to accommodate various new land use scenarios for the proposed development properties; and
- Review the possible road connections for the proposed development properties onto the existing road network.

The Traffic Investigations and Surveys Unit was subsequently requested to undertake a survey to determine the level of “cut-through” traffic movements that may be occurring on the section of Johnston Road between Bank Street and Conroy Road.

2.0 Function and Physical Characteristics of the Street

The section of Johnston Road between Bank Street and Conroy Road functions as a “major collector” street. The street is constructed to a two (2) lane urban standard cross-section between Bank Street and Albion Road and between Conroy Road and a point approximately 150m west of Pennard Way. The remaining section of the street is constructed to a two (2) lane rural standard cross-section.

3.0 Review of Existing Traffic Count Data

The Department has completed eight (8) hour manual traffic counts at a number of intersections along Johnston Road the last several years. The following is a summary of the information obtained from these traffic counts:

16 May 2006 Traffic Count at Albion Road and Johnston Road

- The traffic volume on the section of Johnston Road east of the intersection with Albion Road was approximately 850 vehicles during the a.m. peak hour time period;
- The traffic volume on the section of Johnston Road east of the intersection with Albion Road was approximately 1,000 vehicles during the p.m. peak hour time period;
- The traffic volume on the section of Johnston Road east of the intersection with Albion Road was approximately 6,200 vehicles during the entire time period of the traffic count.

7 May 2007 Traffic Count at Johnston Road and Tapiola Crescent (East)

- The traffic volume on the section of Johnston Road west of the intersection with Tapiola Crescent (East) was approximately 500 vehicles during the a.m. peak hour time period;
- The traffic volume on the section of Johnston Road west of the intersection with Tapiola Crescent (East) was approximately 750 vehicles during the p.m. peak hour time period;
- The traffic volume on the section of Johnston Road west of the intersection with Tapiola Crescent (East) was approximately 3,800 vehicles during the entire time period of the traffic count.

29 June 2007 Traffic Count at Conroy Road and Johnston Road

- The traffic volume on the section of Johnston Road west of the intersection with Conroy Road was approximately 500 vehicles during the a.m. peak hour time period;
- The traffic volume on the section of Johnston Road west of the intersection with Conroy Road was approximately 750 vehicles during the p.m. peak hour time period;
- The traffic volume on the section of Johnston Road west of the intersection with Conroy Road was approximately 4,100 vehicles during the entire time period of the traffic count.

18 June 2008 Traffic Count at Johnston Road and Southgate Road

- The traffic volume on the section of Johnston Road west of the intersection with Southgate Road was approximately 900 vehicles during the a.m. peak hour time period;
- The traffic volume on the section of Johnston Road west of the intersection with Southgate Road was approximately 1,000 vehicles during the p.m. peak hour time period;
- The traffic volume on the section of Johnston Road west of the intersection with Southgate Road was approximately 5,900 vehicles during the entire time period of the traffic count.

The peak hour traffic volumes on Johnston Road are within the range of traffic volumes generally experience on a “major collector” street in the City.

4.0 Observations from the Traffic Count Data

The following is a summary of several observations from the aforementioned traffic counts.

- The traffic volume undertaking westbound movements on the section of Johnston Road west of Conroy Road is approximately 26% of the traffic volume undertaking westbound movements on the section of Johnston Road west of Southgate Road during the a.m. peak hour time period;
- The traffic volume undertaking westbound movements on the section of Johnston Road west of Southgate Road is approximately 65% of the traffic volume undertaking westbound movements on the section of Johnston Road west of Conroy Road during the entire time period of the traffic count;
- The traffic volume undertaking left turning and/or right turning movements on the westbound Johnston Road approach to Albion Road is 24% of the traffic volume on this approach during the entire time period of the traffic count;
- The traffic volume undertaking left turning and/or right turning movements on the eastbound Johnston Road approach to Albion Road is 22% of the traffic volume on this approach during the entire time period of the traffic count; and
- The traffic volume undertaking left turning and/or right turning movements from Albion Road onto Johnston Road (and subsequently traveling east) on Johnston Road is 28% of the traffic volume traveling eastbound on this section of Johnston Road during the entire time period of the traffic count;

5.0 Results from the Origin-Destination Survey

The "Origin-Destination" Survey on Johnston Road was undertaken during the 7:00 a.m. to 9:30 a.m. and the 3:30 p.m. to 6:00 p.m. time periods on 18 June 2008. License plate numbers of all vehicles (as well as the time of day) traveling in both directions were recorded at the following locations:

- Immediately west of the intersection with Southgate Road;
- Between Albion Road and Tapiola Crescent (West);
- Immediately west of the intersection with Zaidan Drive; and
- Immediately west of the intersection with Conroy Road.

A review of the data indicated the number of vehicles recorded in the "Origin-Destination" Survey at the intersection with Southgate Road was less than the traffic volumes recorded at the intersection during the eight (8) hour manual traffic count completed on the same date. Accordingly, the information obtained at this location was not reviewed as part of this project.

The information obtained (i) between Albion Road and Tapiola Crescent (West) and (ii) immediately west of the intersection with Conroy Road was reviewed to determine the percentage of vehicles undertaking "cut-through" movements on Johnston Road. The following is a summary of the results from this review:

- A total of 768 vehicles were recorded undertaking eastbound movements on the Johnston Road approach to Conroy Road during the 7:00 a.m. to 9:30 a.m. time period. A total of 92 vehicles were recorded undertaking "cut-through" movements, which represents approximately 12% of the total number of vehicles traveling on the street during this time period;
- A total of 474 vehicles were recorded undertaking eastbound movements on the section of Johnston Road east of Albion Road during the 7:00 a.m. to 9:30 a.m. time period. A total of 92 vehicles were recorded undertaking "cut-through" movements, which represents approximately 19% of the total number of vehicles traveling on the street during this time period;
- A total of 425 vehicles were recorded undertaking westbound movements on the section of Johnston Road west Conroy Road during the 7:00 a.m. to 9:30 a.m. time period. A total of 68 vehicles were recorded undertaking "cut-through" movements, which represents approximately 16% of the total number of vehicles traveling on the street during this time period;
- A total of 916 vehicles were recorded undertaking westbound movements on the Johnston Road approach to Albion Road during the 7:00 a.m. to 9:30 a.m. time period. A total of 68 vehicles were recorded undertaking "cut-through" movements, which represents approximately 7% of the total number of vehicles traveling on the street during this time period;

- A total of 655 vehicles were recorded undertaking eastbound movements on the Johnston Road approach to Conroy Road during the 3:30 p.m. to 6:00 p.m. time period. A total of 132 vehicles were recorded undertaking “cut-through” movements, which represents approximately 20% of the total number of vehicles traveling on the street during this time period;
- A total of 1,026 vehicles were recorded undertaking eastbound movements on the section of Johnston Road east of Albion Road during the 3:30 p.m. to 6:00 p.m. time period. A total of 132 vehicles were recorded undertaking “cut-through” movements, which represents approximately 13% of the total number of vehicles traveling on the street during this time period;
- A total of 1,109 vehicles were recorded undertaking westbound movements on the section of Johnston Road west Conroy Road during the 3:30 p.m. to 6:00 p.m. time period. A total of 46 vehicles were recorded undertaking “cut-through” movements, which represents approximately 4% of the total number of vehicles traveling on the street during this time period; and
- A total of 785 vehicles were recorded undertaking westbound movements on the Johnston Road approach to Albion Road during the 3:30 p.m. to 6:00 p.m. time period. A total of 46 vehicles were recorded undertaking “cut-through” movements, which represents approximately 7% of the total number of vehicles traveling on the street during this time period.

The following is a summary of the total (i.e. eastbound and westbound) “cut-through” traffic on Johnston Road:

- Approximately 11.4% of the traffic on the section of Johnston Road west of Conroy Road was “cut-through” traffic; and
- Approximately 10.6% of the traffic on the section of Johnston Road between Albion Road and Tapiola Crescent (West) was “cut-through” traffic.