

## CITY OF HAMILTON

### PUBLIC WORKS DEPARTMENT

### (TRANSPORTATION OPERATIONS & MAINTENANCE DIVISION –TRANSPORTATION OPERATIONS - LOCATION – 1375 UPPER OTTAWA STREET)

### TRANSPORTATION SYSTEMS TECHNOLOGIST - CUPE 5167

#### SUMMARY OF DUTIES

Reports to the Project Manager. Undertakes calculations to review roadway capacity, collision rates and adjusts signal operations and timing as required. Develops and modifies signal timing databases for ATC traffic signal controllers. Develops recommendation reports for various committees & departments. Collects and analyzes traffic data related to capacity & road use management. Assists the Project Manager regarding traffic issues that arise.

#### GENERAL DUTIES

Under the supervision or direction of the Project Manager, the Transportation Systems Technologist will:

Assist Project Manager with executing capital projects.

Prepares written correspondence to internal stakeholders, external stakeholders and Councillors regarding traffic operations, road congestion, intersection control and access issues.

Review of engineering drawings such as PHM traffic signal drawings and traffic impact studies. Identify, develop, and analyze alternative solutions to traffic concerns; and recommends best course of action.

Assist in review of warrants and analysis of various modes of traffic control (signals, IPS, PXO, etc).

Develops, modifies, and conducts bench tests of signal timing databases for ATC traffic signal controllers.

Evaluates and troubleshoots traffic signal timing operation and progression in the field, making necessary changes to optimize traffic flow and safety.

Conducts traffic signal and ITS equipment evaluation. Investigate alternate techniques and technologies to ensure that optimal methods are being utilized.

Conduct intersection analysis and corridor reviews using microsimulation software such as Synchro or VISSIM.

Undertake duties as assigned within the Traffic Management Centre, including monitoring, signal modification and implementation, special event assignments related to signal operation and monitoring of daily traffic conditions.

Reviews and recommends improvements to traffic, pedestrian, and bike signals in accordance with the Accessibility for Ontarians with Disability Act (AODA), Ontario Traffic Manual (OTM), Transportation Association of Canada (TAC) and Manual of Uniform Traffic Control Devices for Canada (MUTCDC).

Ensure compliance with Provincial and Federal statutes and regulations and Municipal by-laws and policies, with specific regard for the Occupational Health and Safety Act.

Conducts specialized studies and/or field investigations related to traffic signal operations, corridor analysis, speed and delay studies and roadway capacity. Makes recommendations based on observations and analysis.

Directs, co-ordinates and assigns tasks directly to Traffic co-op students. Checks their work for correctness, monitors and evaluates their performance and relates same to supervisory staff.

Performs other duties as assigned which are directly related to the major responsibilities of the job.

**QUALIFICATIONS**

- 1. Demonstrated experience in Transportation Engineering with considerable knowledge in traffic signals and traffic operations normally acquired by attaining a Three Year Diploma in Transportation or Civil Engineering or an equivalent combination of relevant education and related work experience.
- 2. C.E.T. designation preferred.
- 3. Demonstrated experience in intersection control, traffic signals, traffic signal monitoring systems, programming of traffic signal controlled with knowledge of signal phasing, pre-emption, overlaps and leading pedestrian intervals (LPIs)
- 4. Experience in a computerized environment with proficiency in Microsoft Office Word, Excel and Outlook. Working knowledge of microsimulation traffic software such as Synchro, VISSIM, VISTRO, etc would be an asset.
- 5. Knowledge of Occupational Health and Safety Act, AODA, Highway Traffic Act and relevant municipal statutes.
- 6. Knowledge and understanding of all relevant statues and standards such as of Ontario Provincial Standards Specifications (OPSS), Ontario Provincial Standards Drawings (OPSD), Transportation Association of Canada (TAC) Geometric Design Guidelines, Manual of Uniform Traffic Control Devices for Canada (MUTCDC), Ontario Traffic Manuals (OTM), and other relevant technical manuals.
- 7. I.M.S.A. Certification would be an asset.
- 8. Periodically able to lift up to 15 pounds of traffic signal infrastructure.
- 9. Possess valid Class "G" Driver's Licence and provision of own car.

**THIS POSITION REQUIRES A VALID CLASS "G" DRIVER'S LICENCE AND PROOF THEREOF IS REQUIRED AFTER HIRE.**

**THE INCUMBENT SHALL COMPLY WITH ALL HEALTH AND SAFETY POLICIES AND PRACTICES FOR THIS POSITION AND THE WORKPLACE**

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