

# IE9.6 - Attachment 2

## Attachment 2: Congestion Management Plan Accomplishments To-Date

Congestion Management Plan accomplishments since its initiation at the start of 2014 are described here, organized per the categories used in the Plan:

### 1. Incident and Event Management

- Completed the upgrade of Toronto's Advanced Traffic Management System (ATMS) at the Traffic Operations Centre (2018)
- Deployed the "Steer it – Clear it" Program (2014)
- Installed 17 Expressway variable message signs (2014)
- Deployed travel time information on our variable message signs on both the Gardiner Expressway and Don Valley Parkway (2014)
- Completed renovation of the Transportation Operations Centre including major update of video monitoring tools (2014)
- Completed Freeway Service Patrol Feasibility Study (2015)
- Installed 108 LED Blank-out signs to improve turn prohibition compliance (2014-2018)
- Piloted arterial-based travel time messages (2015)
- Completed a new Concept of Operations for the Transportation Operations Centre (2016)
- Completed Emergency Vehicle Pre-emption user need workshop (2016)
- Installed 75 uninterruptable power supplies installed for key signalized intersections (2014-2017)
- Installed 190 traffic monitoring cameras (2014-2018) on arterial roads to bring the total number of cameras to 279 (233 on arterials, and 46 on the expressways)
- Completed Active Traffic Management Industry Review (2017)
- Updated RESCU Transportation Operations Centre (TOC) Operation Service Contract (2017)
- Toronto Police Services in the Transportation Operations Centre (2017)
- Deployment of Quick Clear Squads during the morning rush hour to expedite the clearance of temporary lane blockages on the Gardiner Expressway (2017)
- Completion of a pilot to connect unattended aerial vehicles (drones) to the Transportation Operations Centre for assess traffic management potential (2017)

### 2. Arterial Traffic Operations

- Deployed Pilot "Courier Zones" in Downtown Toronto (2014)
- Completed operational review of SCOOT adaptive traffic signal control (2014)
- Installed new Traffic Control Signals as follows:
  - 20 new traffic control signals in 2016
  - 13 new traffic control signals in 2017
- Completed 'Priority Corridor' traffic signal timing optimization studies as follows:
  - 7 corridors (224 signals) in 2014
  - 11 corridors (337 signals) in 2015
  - 17 corridors (357 signals) in 2016
  - 13 corridors (281 signals) in 2018

- 10 corridors (208 signals) in 2019
- Installation of 169 non-intrusive vehicle detection devices (2016 to 2018) to bring the total number to 360 devices across the City
- Installation (on-going) of Bluetooth traffic flow detection in support of traffic studies and provision of travel time on variable message signs.
- Review Downtown Peak Hour Stop Restrictions on Transit Routes (2017)  
Congestion Management Plan Update
- Completed the detail Design for Lower Don Traffic Management System (LDTMS). The LDTMS will detour vehicles along Bayview Avenue to prevent them from entering a flooded zone during extreme rain events (2019)

### **3. Construction Coordination**

- Increased road and lane disruption enforcement (2015)
- Purchase of three portable variable message signs for construction management and in support of Lower Don flooding events (2017)
- Complete procurement for a new "Smart Work Zone" trailer (2018)
- Complete deployment of "Smart Work Zone" pilot on Jarvis Street (2019)

### **4. Curb-side Management**

- Completion of Downtown Transportation Operations Study (2014)
- Pilot of Traffic Assistive Personnel (2016)
- Completion of Curbside Management Plan (2018)

### **5. Traveller Information**

- Deployed Traffic Reports via Twitter (2014)
- Completely redesigned & redeveloped the Road Restrictions website (2015)
- Completed an Advanced Traveller Information Services Strategy (2017)
- Completed an Enterprise Data Warehouse (EDW) Needs Assessment and Preliminary Design (2017)
- Installation of Traveller Information Screens at TPA Church Street Garage (2017)

### **6. Smart Cities / Big Data**

- Initiation (2015) & on-going support for Transportation Services' unit investigating autonomous vehicle preparedness
- Initiation (2015) & on-going support for the City's first 'Big Data Innovation Team', used to pro-actively analyze data for infrastructure investments and road network strategy decision making
- Deployed 'Big Data' real-time and historical data via commercial purchase (2016)
- Completion of agreement with Waze (for accessing crowd-sourced event information and communicating information to users) pending resolution of Legal agreement (2017)
- Structural Integrity Inspection for the City's five 'legacy' Variable Message Expressway Signs (2018)

- Completed a Threat and Risk Assessment for the Traffic Management Centre (TMC) systems (2019)
- Completed the Automated Vehicles Tactical Plan. This plan outlines the work that the City should complete in preparation for future technological impacts derived from autonomous vehicles (2019)
- Purchased and installed 32 video counting cameras to monitor the performance of the King Street project. In the future, these cameras will be reinstalled at different locations to help evaluate the performance of new initiatives (2019)

## **7. Support of All Modes of Transportation**

- Completed Transit Signal Priority Strategy Update (2016)
- On-going deployment of transit signal priority (as requested across the City)
- Staffing support for ECLRT, King Street Pilot, and transit signal priority policy
- Completed an update to the Congestion Management Plan to account for the 2016-2020 period.

## **8. State of Good Repair**

- Upgraded the Systems Maintenance & Testing Lab (2014)
- Upgraded W.R. Allen Road 'Queue End Warning' traffic monitoring cameras and related communications (2015)
- Investigation of Automated Vehicle Technology and Industry Trends in related Policy, Planning and Investment Options (2016)
- Upgraded Communication Infrastructure between TMC and 229 Field Signal Controllers (2016)
- Upgraded traffic flow and traffic volume detection capabilities (2014-2017)
- Upgraded CCTV Subsystem for the Don Valley Parkway (2017)
- Completion of camera maintenance contracts for Arterial CCTV Phases 1-3 Deployments (2017)
- Detection updates (2017)
- Implementation of new communications head-end hardware to facilitate provision of RESCU video feeds to media and City facilities (2017-2019)
- Conversion of communications from 3G to LTE technology
- Conversion of existing Analog cameras to IP technology (2018-2019)
- Provision of traffic signal controller cabinets for new traffic signal intersections and traffic signal modifications (2018-2019)
- Upgraded GPS clocks for LBO operations (2019)
- Upgraded BlueTooth sensors along the City expressways (Gardiner and DVP) (2019)
- On-going upgrades/state of good repair maintenance to field equipment (e.g. communication links, traffic signal controllers, variable message sign modems, cameras, etc.)