Our Transportation System is in Crisis – 232

The first phase of the National Traffic Management System (NTMS) was opened by the Ministry of Works and Transport (MOWT) on May 23, 2011. It is supposed to be World Class, State-of-the-Art technology in Intelligent Transportation Systems (ITS), which is defined by ITS Canada as "*the application of advanced and emerging technologies (computers, sensors, control, communications, and electronic devices) in transportation to save lives, time, money, energy and the environment*."

At the launch, the MOWT explained that tenders were invited in 2009 for a design-build contract for the Port of Spain East West Corridor of the Churchill-Roosevelt Highway, Beetham Highway and Wrightson Road between Uriah Butler Highway in the west, and Ana Street in the west. It was won by the IBI Group from Canada at a price of TT42 Million. The next ranked bid-price was TT$70 Million. Dessau Consulting from Canada was awarded the supervisory services, and their transportation expert from from Canada presented a report to the Ministry in February 2011.

The NTMS consists of three components: (1) Traffic surveillance and control system (TSCS); (2) Corridor Traffic Management System (CTMS); and, (3) National Traffic Management Centre (NTMC). The local sub-consultants for the design-build project was (a) Illuminat, for wireless communication; (b) Trinsult, for retrofitting of the NTMC; (c) Signal Specialists, for traffic signal installation; and, (d) Electra, for field installation support.

The design was completed in 2010. System testing and integration was also done in 2010, and implementation of the project will be completed by June 2011. Some salient details about the system are as follows:

- Between Ana Street and Uriah Butler Highway there are 11 signalized intersections;
- The central software is Centracs;
- There is centralized clock synchronization;
- There is provision for pedestrian countdown timers;
- There is central control and diagnostics;
- There are three signal timing plans: AM peak, PM peak, and off-peak;
- There are 18m poles on the highway mounted with CCTV;
- The central video management system is expandable to 255 cameras; and,
- Lane vehicle data will be recorded continuously and stored for a year.

The MOWT informed that the design-build contractor will operate the NTMS for the next three years, during which time local professionals and sub-professionals will be trained in managing the system and operating the Centre. The MOWT suggested that in the future the following will be added to the system: (1) Average Speed System, or the determination of the average speed of a vehicle over sections of 2 km (versus spot speed of a vehicle through a speed measurement device such as a radar gun), so that even if a driver senses that the Police might be conducting spot speed enforcement checks, and slows down until he passes, the system can check on the overall speed by the driver over any 2 km segment of roadway; if legislation is passed, these can be used for more efficient monitoring of speed enforcement; (2) Red-light-running enforcement system, or the ability to check on drivers driving through a red signal; (3) Radio frequency Identification (RFID), or the ability to monitor and enforce vehicle registration information; (4) removal of queues on the CRH between UBH and UWI in St. Augustine, through the construction of overpasses; and, (4) Extension of the NTMS to other areas such as San Fernando, Princes Town, etc.

The MOWT also stated that a National Incident Management Team is to be introduced, and will include personnel involved in law enforcement, emergency response, and traffic management.

I am happy with what I have heard and seen so far. However, I currently have two concerns:

1. Why were loop detectors installed at the approaches of the 11 intersection? TnT has used loop detectors for nearly 40 years, and the experience on our highways, in particular, has not been too good, as there is often damage to these detectors, due to 'shoving' of the asphalt, resulting in poor signal operations and frequent loop replacement. Video camera detection technology at these intersections would have avoided that installation process altogether, as virtual loops are used on the computer screens. I am sure that in two to three years, video detection technology will be recommended, so why did the foreign experts not recommend them now, as part of their state-of-the art. My suggestion to the MOWT is this: deduct the cost from the current contract sum!

2. Why have advance approach detectors not been included to facilitate our problem of the dilemma zone? With optimization of traffic signals on the primary roadways, and expected higher speeds through intersections, there is likely to be some confusion with higher speed flows when the amber signal shows, in that some drivers might be in a dilemma on whether they will be able stop before the stop-line, or do they have enough time clear the intersection

safely. About 25 years ago TnT started testing loop detectors placed 30 to 50 m in advance of the approach to the intersection in order to assist with this problem. The problem was the maintenance of the loops because of the problem stated earlier, but with today's technology, video detection can use virtual loops to easily achieve this. A good example of the dilemma zone problem is the westbound approach of the CRH at its intersection with Southern Main Road in Curepe. There have been several accidents there, especially with trucks.

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