I. Diversion Route Planning Workshop, October 12, 2011

The Traffic Management Center (TMC) hosted a discussion, led by Steve Hetrick (Naztec ITS), on diversion route planning. This workshop brought together members of the City of Virginia Beach’s Fire Department, Emergency Management Center, Emergency Medical Services, 911 Call Center, Police Department, Public Works Department, and Traffic Management Center. The goal of the workshop was to receive input from the various agencies on proposed I-264 and I-64 diversion routes. The Diversion Route Plan would provide alternative City of Virginia Beach street routes, and the subsequent traffic signal timing, to traffic diverted from the I-264 and I-64 highways. These diversions would be put into effect when traffic incidents occur along the interstate. There was also discussion regarding the several factors involved in selecting the various diversion routes. These factors included:

- Assessment of each route to determine if it is conducive to diversion activity
- The viability and practicality of each route for use as a diversion
- The number of traffic signals impacted by the route
- The ability to implement traffic signal timing plans for each route
- The decision process on how to determine when to implement the diversion plan
- The decision process on how to determine the severity and duration of the traffic incident on the highway

After the explanation of the diversion route plan, the various agencies discussed the broader impacts of the plan, and how it affects the jurisdiction of their agencies.
This conference was attended by members of the City of Virginia Beach Traffic Management Center. The members in attendance included George Hardin, Lincoln Figuereo, Greg Sawyer, and Franklin Hickman. This was a very informative conference and we were able to bring back numerous ideas. Some of these ideas we will be able to utilize right away, other ideas will be for future considerations. The conference had 10,000 attendees from 65 countries. In addition to attending technical sessions, we were able to talk to vendors and see the latest products, and get ideas on how to solve our traffic management needs. We found this conference very valuable and hope to have the opportunity to attend similar conferences in the future.
A few of the Information Sessions are presented below:

**Connected Vehicle Research Program**
This program, which was conducted by Japanese researchers, illustrated the advantages of vehicle-to-vehicle communications. Cars from different manufacturers were equipped with communication devices and run on the Disney Speedway. The cars were capable of detecting approaching vehicles, in forward or rear blind spots, and sounding warnings to the driver.

The Connected Vehicle researchers presented vehicles capable of detecting pedestrians entering a roadway. The detection of the pedestrians in the roadway triggered the brakes on the approaching vehicles.
Vehicle to Infrastructure (V2I) for Intersections
A Japanese firm presented a technical/scientific session which involved development of pedestrian to vehicle communications. This development can be used to avoid conflict between right-turning vehicles and pedestrians transitioning through cross walks. The prototype system involved use of a cell phone sized device on the pedestrian, communicating with dedicated short range transmitters on the vehicles.

Adaptive Traffic Signal Control System Operations
Adaptive signal control involves the use of real time detection, and algorithms, to determine the proper green light signal band to use on a specific corridor. This signal control system would displace the typical time-of-day traffic signal plan for the corridor. This technology is constantly evolving; a German firm presented this session. Adaptive signal control is a method of calculating minimum cycle lengths at intersections. It is used to optimize the cycle lengths along a given corridor. We are interested in this technology because it would remove the need to re-time traffic signals. The traffic signal control system would automatically retime itself constantly as traffic patterns dictate.

Automated Incident Detection Systems
Dr. Assad Khattak, Professor of Civil Engineering, Old Dominion University, a local area representative, presented an interesting technical paper on “Queuing Delays Associated with Secondary Incidents”.

Networking
We were able to communicate with members of RITA (Research and Innovative Technology Administration) at the US Department of Transportation (USDOT). We discussed the possibility of using Virginia Beach as traffic systems demonstration test bed. The USDOT is very interested in partnering with agencies on specific projects.

III. Traffic Management Operations Division Response Information
Some of the vital statistics we address each month

1. Number of Traffic Counts Scheduled/Completed – 33/34
   - In addition, we collected turning movement counts at 6 intersections

2. Number of Hits on the Traffic Data Database (at www.VBgov.com/TCDS)
   - 238 hits for the month of October 2011
   - 4,818 hits since program inception (July 2009)

3. Number of Utility Locate Tickets (Miss Utility) Received/Checked/Marked – 2497/291/202

4. Number of Traffic Signal Preventive Maintenance Actions completed – 47

5. Number of Traffic Signal Work Orders Received – 112

6. Number of Traffic Sign Work Orders Completed – 349

7. Linear feet of Thermoplastic Applied to Roadway – 20,545