

**TRAFFIC SIGNAL SUBCOMMITTEE**

**Monday, June 5, 2017**

**Baltimore Metropolitan Council**

**NOTES**

**1. SMART SIGNALS**

Mr. Ben Myrick (SHA), chair of the Traffic Signal Subcommittee, gave a preview of an upcoming announcement from the Governor and Secretary on smart signals to be deployed across the state in the very near future. Smart signals include adaptive control, Advanced Traffic Management Systems (ATMS), connected and autonomous vehicle technologies (AV/CV), performance monitoring and ramp metering.

Adaptive control allows signal timing to change as per actual conditions and on average can improve travel time by more than 10 percent. Maryland has been pilot testing adaptive control along several corridors – there are currently 36 adaptive signals in four systems. Mr. Myrick pointed to the US 1 corridor in Elkridge which has been in operation since October 2015 – before/after studies point to a 3 percent reduction in travel time – which he noted may not seem like a lot on the surface – but when you take into account a 30 seconds per vehicle reduction in travel time over roughly 30,000 vehicles a day, that adds up to a significant reduction. A much higher reduction in travel time – closer to 10 percent - was observed during some periods along the MD 24 corridor in Bel Air. Two more adaptive systems are currently being deployed, MD 139 in Towson and US 301 in Bowie. And another 50 plus intersections are planned for FY 2018 using a prioritized list of locations. He noted that there are several challenges to keeping adaptive systems operational – reliable communications, disruptions caused by construction, reprogramming for added, removed, rebuilt signals, etc.

On performance monitoring, Mr. Myrick noted that there is a move towards corridor goals such as safety, pedestrian accessibility, and multi-modal measures. Traditionally, delay and travel time were being used but the ATMSs provide more tools such as percent arrivals on green, cycle failures, etc. There are currently 99 signals in the Baltimore region on an ATMS – more are being added along high profile corridors along with adaptive control. MDOT wants to be leader in supporting CV/AV development and the US 1 corridor between MD 32 and I-195 has been identified as a demonstration corridor. SHA is currently testing CV/AV ready signal controllers on the MD 2 corridor.

For the I-270 Innovative Congestion Management (ICM) corridor, ramp metering is one of the strategies being evaluated. The team has been studying efforts in Portland, Minneapolis and other places and looking to determine who monitors and operates the system.

***[Handout: Smart Signals]***

## **2. USING A SINGLE SENSOR FOR DILEMMA ZONE AND COLLISION AVOIDANCE**

Mr. Patrick Corridon presented software and tools developed by Iteris, Inc. to make intersections safer. Vantage vector is a single sensor for multiple applications that reduces dilemma zone conflicts using a combination of video detection and radar detection in a single sensor. It provides both stop line and advanced sensing in a single effective unit. It can also be used for live video, bicycle differentiation, pedestrian measurement/counting, and for improved intersection efficiency.

**[Handout: Vantage Vector, Iteris Inc.]**

## **3. REGIONAL TRAFFIC SIGNAL FORUM/ITSMD ANNUAL MEETING**

The Signal Subcommittee will host the 9<sup>th</sup> regional traffic signal forum on November 8<sup>th</sup> at the Maritime Institute. It will be held in conjunction with the ITSMD Annual meeting. Members discussed potential topics and speakers.

Smart signals, connected and autonomous vehicles, integrated corridor management and the I-270 project are some of the main topics that could be featured at the forum.

### **Members:**

Yeshitla Argaw, State Highway Administration (SHA)  
Jenn Biddle, Howard County Department of Public Works  
Chris Letnaunchyn, Carroll County Department of Public Works  
Ben Myrick, SHA/OOTS  
Kris Nebre, Baltimore County Department of Public Works  
Piotr Rachtan, SHA  
Raj Sharma, Baltimore City Department of Transportation

### **Staff and Guests:**

Bala Akundi, Baltimore Metropolitan Council (BMC)  
Eddie Bostic, Century Engineering, Inc.  
Patrick Corridon, Iteris, Inc.  
Sandi Dunmyer, TS & T  
Blake Fisher, BMC  
Mike Harrington, Sabra, Wang & Assoc.  
Craig Hinnners, McCain  
Woody Hood, SWA  
Jennifer Knight, SWA  
Steve Robinson, Trafficware  
Bob Lesueur, Sensys Networks  
Diederick VanDillen, Jacobs