RFRP #11/12-010

Demand Based Signal Retiming

Technical Questions and Responses

In the RFP, and during the pre-proposal conference call, FDOT and Broward County staff referred several times to the system of sensors which will provide real-time traffic data on the given network by 2014. The RFP asks that a method proposed for reporting demand should 'utilize existing resources to the extent possible'.

Question: Can FDOT clarify whether the method for reporting traffic demand should be developed around the existing sensors (and the types of data that they report) or around the sensors and data flows which will exist once the new real-time system is in place by 2014?

Response: The method should first consider the system as it is today because the system countywide will not be upgraded (in the near future) and the method identified by the Research Team should be implementable countywide. However, if the Team believes that their results are not acceptable using the existing equipment, their proposed method can consider supplementing the existing equipment with new devices or software, including the devices and software that are already scheduled to be installed through the FDOT/Broward County Advanced Transportation Management System (ATMS) projects.

Related to the previous question there are additional sub-questions:

Question: Are the vendors for the real-time sensor systems known and can FDOT share this information with potential proposers?

Response: Broward County utilizes two vehicle detection camera vendors: Iteris and Trafficon. Most of the cameras are Trafficon.

The other devices have not been procured yet. The ATMS project in Central Broward County was just awarded and the winning team proposed the following vendors in their technical proposal:

Wavetronix SmartSensor HD and the Wavetronix SmartSensor V

Sirit AVI Reader Antenna – IDentity 5100 and IDentity 5200/5204 (AVI for travel time and O-D information is a pilot test on Broward Blvd. and SR-7 in Fort Lauderdale only, may not be a system used elsewhere on Broward County arterials)

TrafficCast BlueToad

Question: What type of sensors will be installed as a part of TSM&O project on this network (e.g. stop-line detectors, mid-block detectors, Bluetooth measuring systems, etc.)?

Response: The existing vehicle detection cameras are either located on the mast arms or attached to a strain pole.

The MVDS and Bluetaod devices are located outside of the intersections and will be pole mounted. The AVI readers will be installed on existing mast arms.

Question: How many of the sensors (of each type) will be installed and where?

Response: The design has not been finalized yet. It is estimated that on Broward Blvd. between SR-7 and US-1 there will be:

6 Bluetooth devices

5 MVDS

6 locations for the AVI (2 at each site, 1 for EB and 1 for WB traffic)

Question: Is FDOT flexible about sensor coverage (number of sensors and their locations) or are the numbers and locations fixed and cannot be changed?

Response: No, we can't modify our existing device locations. The new devices' locations have not been finalized. FDOT, Broward County and the Design Build Firm will be determining the final locations over the next few months. The Vehicle Detection Cameras may be repositioned at Broward County and FDOT's discretion.

Question: Will all of the intended sensors have capability of reporting real-time data?

Response: The new devices will have this ability. The existing devices, the vehicle detection cameras, have this ability but have not been used to do this yet and may require some modifications.

Question: What is exactly meant by real-time? At the bottom line reporting will have to be done in discrete time intervals (e.g. 5 min, 15 min, 30 min, 1 hour) – which time intervals will be used to report traffic data from various sensors?

Response: The time interval has not been defined yet. The reporting intervals will be limited by the software and the devices being used. The software that will be used to operate most of the devices is SunGuide. BlueToad servers and algorithms will be separate from SunGuide. Broward County also has a license for ATMS.Now, which is another software that may be used.

Question: More specifically, it was mentioned that a video detection system, which will be installed in the next 6-8 months, will be able to provide some traffic counts (e.g. intersection turning movement counts - please clarify if this is a wrong interpretation of what was mentioned during the pre-proposal meeting). What type of data will the video detection system collect and how will these data be reported?

Response: The vehicle detection cameras referenced in the pre proposal meeting are existing devices. They should have the ability to collect turning movement counts and speed data, but their accuracy is dependent upon where they are located (on the mast arm vs. the strain pole locations).

We understand that some of these questions may go into details of particular technologies but if information about vendors and type of product is provided potential proposers can research on their own the details of the technologies, data formats, and reporting capabilities.