

# MEMPHIS URBAN AREA REGIONAL ITS ARCHITECTURE UPDATE WORKSHOP MINUTES

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**MEETING DATE:** March 6, 2014

**MEETING TIME:** 10:00 AM – 12:00 PM

**MEETING LOCATION:** Shelby County Code Enforcement Training Room, Memphis, TN

## **ATTENDEES:**

- Becky Bailey, City of Bartlett
- Jeff Beaman, City of Germantown
- Gary Bennett, Arkansas State Highway and Transportation Department (AHTD)
- Robert Benshoof, Tennessee Department of Transportation (TDOT)
- Eddie Brawley, West Memphis Metro Planning Organization (MPO)
- Pat Brown, City of Gallaway
- Jackie Clark, Arkansas Highway Patrol
- Gary Dalporto, Federal Highway Administration (FHWA) – Arkansas Division
- Tim Gwaltney, City of Germantown
- Asem Halim, TDOT
- Sajid Hossain, Memphis MPO
- Aury Kangelos, TDOT
- Mark King, Town of Collierville
- Ed Johnson, TDOT
- John Lancaster, Memphis Area Transit Authority (MATA)
- Mitchell Lloyd, Memphis MPO
- Carlos McCloud, TDOT
- Frank McPhail, Town of Collierville
- Tom Needam, Shelby County
- Nick Renna, FHWA – Tennessee Division
- John Selberg, City of Germantown
- Pragati Srivastava, Memphis MPO
- Tom Fowler, Kimley-Horn and Associates
- Terrance Hill, Kimley-Horn and Associates
- Kenny Monroe, Kimley-Horn and Associates

**SUBJECT:** Memphis Regional ITS Architecture Update – Project Kick-Off Workshop

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## **Introductions**

Pragati Srivastava of the Memphis Metropolitan Planning Organization (MPO) welcomed everyone and thanked the stakeholders for their participation in the update of the Memphis Urban Area Regional Intelligent Transportation System (ITS) Architecture. She introduced the consultant team managing the update to the Regional Architecture. Everyone in attendance introduced themselves and identified the agency or organization they were representing.

## **Project Overview Presentation**

Tom Fowler of Kimley-Horn gave a presentation on the Memphis Urban Area Regional ITS Architecture Update project. The presentation included an overview of ITS, explanation of a regional ITS architecture, and a description of the steps that will be used to update the Memphis Urban Area Regional ITS Architecture.

The purpose of a regional ITS architecture is to provide a vision and framework for the deployment, integration, and operation of ITS. The regional ITS architecture is also necessary in order to meet the FHWA and Federal Transit Administration (FTA) ITS architecture conformity requirements, which require that any ITS projects funded with federal transportation funds conform to a regional ITS architecture. Although updating the regional ITS architecture does not guarantee funding for a region, it does allow the region to be eligible for federal funding of ITS projects.

In addition to the Kick-off Workshop, there will be a series of stakeholder interviews conducted in April. The purpose of the interviews will be to identify any changes that have occurred since the last update of

the Memphis Urban Area Regional ITS Architecture in 2010, identify ITS needs, document any current and planned ITS projects, and develop a list of project needs. Once the interviews have been completed, a Draft Regional ITS Architecture and Deployment Plan Update report will be developed. A second workshop, tentatively scheduled for mid-June, will allow stakeholders the opportunity to comment on the document before it is finalized.

A list of stakeholder agencies that were invited to participate in the process was also presented. Tom asked those in attendance to identify any missing stakeholders from the list. Tom also encouraged everyone to extend an invitation to anyone else within their own agency that they thought might be interested in participating. The following is a list of additional agencies or organizations that the stakeholders in attendance agreed should be include in the update process:

- Federal Express
- West Tennessee Freight Advisory Committee
- City of Byhalia
- City of West Memphis

### **Existing and Planned ITS Projects**

Tom Fowler and Kenny Monroe led a discussion to identify any new projects that have been deployed or planned in the Region since the last Regional ITS Architecture in 2010. The inventory will assist the project team in preparing a Draft Regional ITS Architecture and Deployment Plan Update for the next workshop. The following is a summary of ITS deployments and projects identified by the stakeholders in attendance at the workshop:

#### **MATA**

- All fixed-route buses and trolleys have automatic vehicle location (AVL) systems installed;
- The AVL system also has a transit security component in which cameras have been installed on all city buses, trolleys, and MATApplus (paratransit) vehicles;
- A vehicle health monitoring package for the AVL allows for maintenance tracking (tire pressure, oil temp, and fluid levels);
- An automated dispatch system has been implemented;
- All fixed-routes buses employ automatic passenger counting;
- A transit signal priority system has been installed at 57 intersections along Polar Avenue (US72) and Elvis Presley Boulevard (US51), which utilizes the AVL system's GPS technology. Many of these signals have existing infrared systems that will be supplemented by the GPS systems;
- Bus/trolley stop and schedule information has been provided to Google Transit. The MATA website has a trip planner for riders;
- MATA would like to implement a fare management and tracking system which would include updating their transit fare boxes to smart cards in approximately 2-3 years;
- Dynamic message signs (DMS) have been implemented at all trolley stations inform riders of the next arriving trolley;
- The MATA website offers a feature called SmartTraveler Plus that allows the riders to see the buses' locations as the buses travel their routes. The feature also displays estimated times of arrival for each stop;
- Riders can also text MATA for locations for the next bus on their chosen route;
- MATA would like to add express routes on I-40 in conjunction with the high occupancy vehicle (HOV) lanes and utilize the DMS;
- MATA hopes to further utilize social media by providing more information through those outlets. MATA currently has Facebook, Twitter and YouTube accounts.

#### **TDOT**

- TDOT plans to extend the TDOT SmartWay system along I-40 (installation of 10 additional cameras and three DMS);

- Two full-color DMS will be installed adjacent to the projects for the I-40/I-240 interchange reconstruction and replacement of the Wolf River Bridge on I-40. These DMS will allow for lane management capabilities;
- TDOT would also like to add streaming video from the CCTV cameras to its SmartWay website;
- Nashville operates the TDOT Region 4 SmartWay Traffic Management Center (TMC) in Memphis at night and on weekends. TDOT would like to go to a 24-hour operation at the Region 4 SmartWay TMC in the future;
- There are plans to deploy SmartWay components along SR385/I-269.

#### **Other Agencies**

- Shelby County is implementing traffic signal communications upgrades, traffic signal timing updates, video detection, and emergency vehicle preemption as part of their Congestion Mitigation and Air Quality (CMAQ) Program;
- Weigh-in-motion technology is utilized at weigh stations on I-40;
- West Memphis is working to comply with a Federal requirement that real-time information be reported on the interstates in metropolitan areas by November 8, 2014;
- Arkansas has received a TIGER Grant for ITS elements along river crossings with Louisiana and Mississippi. Each agency will operate their own ITS equipment.

#### **ITS Needs**

Tom Fowler and Kenny Monroe also led a discussion on the Region's ITS needs. The following general regional needs were identified:

- Interagency coordination needs to improve, although AHTD, TDOT, Shelby County, West Memphis, Crittenden County and Memphis have a memorandum of understanding (MOU) for coordination in place. However, the stakeholders in attendance were not sure if that MOU had ever been signed by all of the partners;
- Additional MOUs for ITS exist because of the CMAQ signal upgrades project. Bartlett and Memphis have a MOU. Germantown and Memphis also have a MOU;
- It's important to share information especially in instances in which interstate incidents force travelers to utilize secondary roads;
- Traffic Operations Centers (TOC) in all cities should have communications to the TDOT Region 4 SmartWay TMC in Memphis, but limited funding has prevented this and most municipalities do not have an existing connection;
- The Memphis Urban Area Region should explore funding mechanisms for ITS. FHWA has a grant program for ITS collaboration;
- Signal preemption is being installed with the CMAQ program at many of the signals for emergency responders and fire trucks. Expansion of signal preemption should continue;
- More traffic signals need to be interconnected, preferably by fiber optics.
- Interagency coordination improvements should include severe weather and roadway condition communications between states for use on DMS, highway advisory radio (HAR), in-car or cell phone navigation systems and 511;
- The Shelby County Office of Preparedness completed an evacuation study in the event of a large earthquake along the New Madrid Fault Line. The summary of the study is that most bridges would fail. The general strategy that is recommended is that people should shelter in place and wait for help, rather than evacuate the area. There should be ITS measures to reduce the impact of an earthquake on traffic;
- The third river crossing of the Mississippi River, known as the Southern Gateway project, is in the environmental study phase and likely won't be constructed for another 15 years. It is anticipated that the bridge would be a multi-modal bridge for vehicles, pedestrians, bicycles and rail. ITS opportunities for this crossing should be explored;
- Need to examine the possibility of automated pedestrian and bicycle counts along the Greenline and other greenways in addition to bicycle detection at traffic signals;
- AHTD would like to construct a regional TMC in eastern Arkansas within the next 5 years;

- Use ITS applications to assist with enforcement of HOV lanes;
- Discussions related to ramp metering have occurred within TDOT, and test locations are being evaluated;
- The movement of freight is important to the Memphis economy, and ITS can be utilized in the collection of freight data in addition to providing and receiving pertinent information for all modes (truck, rail, water, and air).

### **Concluding Comments and Next Steps**

Sajid Hossain from the Memphis Urban Area MPO and Tom Fowler thanked everyone for their participation and reiterated that stakeholders will be contacted in the coming weeks to set up an appointment for an interview. Stakeholders were encouraged to contact any of the project team members if they had any questions or if they would like to add additional items to the ITS inventory or needs. Contact information is included below:

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