

**MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
INTELLIGENT TRANSPORTATION SYSTEMS COMMITTEE**

October 12, 2016
MAG Chaparral Room, 2nd Floor
302 North First Avenue
Phoenix, Arizona

MEMBERS ATTENDING

Dave Riley for Steve Ramsey, ADOT	April Wire for Nicolaas Swart, Maricopa County
# Yingyan Lou, ASU	Avery Rhodes, City of Mesa
Chris Hamilton, City of Avondale	Steve McKenzie, City of Peoria
Tammy Valadez Paz, City of Buckeye	Mohamed Youssef, Town of Queen Creek
Mike Mah, City of Chandler	Marshall Riegel, City of Phoenix
# Sergeant John Paul Cartier, DPS	Leslie Bubke for Reginald Fitzpatrick, City of Scottsdale
* Bryce Christo, City of El Mirage	Albert Garcia, City of Surprise
* Jennifer Brown, FHWA	# David Lucas, City of Tempe
Rajnish Gupta, Town of Gilbert	Thomas Fitzgerald for Jay Yenerich, Valley Metro
Allan Galicia for Debbie Albert, City of Glendale	
Luke Albert, City of Goodyear	

OTHERS PRESENT

Ann Phillips, ADOT	Cory Steele, Strand
Mark Poppe, ADOT	Lisa Burgess, Kimley-Horn
# Rob Dolson, City of Maricopa	Ray Yparraguirre, Kimley-Horn
John Dee, City of Phoenix	Jim Schoen, Kittelson
Reginald Fitzpatrick, City of Scottsdale	Sandy Thoms, Jacobs
Jeff Jenq, OZ Engineering	Margaret Boone, MAG
Don Wiltshire, YSMA	Ryan Gish, MAG
Don Tappendorf, Michael Baker	Micah Henry, MAG
Arnab Gupta, AECOM	Eric Nava, MAG
Scott Kelley, Amec Foster Wheeler	Sarath Joshua, MAG

- * Not present or represented by proxy
- # Participated by teleconference
- + Participated by videoconference

1. Call to Order

Chair Marshall Riegel called the meeting to order at 9:30 a.m. and conducted introductions.

2. Approval of the September 7, 2016 ITS Committee Meeting Minutes

Chair Riegel requested approval of the meeting minutes from the September 7th ITS Committee meeting. **Leslie Bubke from City of Scottsdale moved, Steve McKenzie from City of Peoria seconded, and it was unanimously carried to approve the minutes of the meeting held on September 7, 2016.**

3. Call to Audience
Chair Riegel made a call to the audience providing an opportunity for any members of the public to address the ITS Committee. No comments were received.

4. Program Manager's Report
Chair Riegel invited Sarath Joshua from MAG to present the Program Manager's Report. Mr. Joshua addressed the following items in the report:

➤ City of Buckeye ITS Strategic Plan

The City of Buckeye will be coordinating with MAG staff to develop the ITS Strategic Plan. This project was request by the City and the budgeted amount is for \$100,000 for the ITS on-call task order. This project is funded with MAG Planning funds and a \$10,000 contribution by the City. The proposal review panel was established and the scope of work finalized for the project. MAG staff initiated the mini-RFP process with four on-call consultants including Kimley-Horn and Associates, Lee Engineering, Jacobs Engineering Group, and AECOM Technical Services. Proposals are due Oct. 19th. The Panel recommendation will be presented to the ITS Committee in November for recommendation and then carried forward through the MAG committee process.

➤ ITS Arizona Annual Conference

The ITS Arizona Annual Conference was held last month. The MAG project, DPS Co-location Benefit-Cost Evaluation, won best ITS Planning Award.

5. FY2017 Traffic Signal Optimization Program – Call for Projects

Chair Riegel invited Sarath Joshua and Micah Henry with MAG to provide a status update for TSOP projects. On September 13, 2016, a call for projects was announced to identify new TSOP projects for FY 2017. A total of \$300,000 is available to be programmed for new projects to be carried out through on-call task orders. Project applications were due by Noon on October 7th. Eleven (11) project applications were submitted for consideration. A complete set of project applications was forwarded via email to each committee member for review.

The projects were summarized for the Committee including the lead agency, other participating agencies, the project location, the number of intersections included in the project, and the estimated cost. The project applications included:

- ADOT (with City of Peoria and City of Glendale) – Signal optimization on Grand Avenue from Loop 101 to 51st Avenue.
- ADOT (with City of Phoenix) – Signal optimization on Thomas Rd. corridor at I-17.
- City of Buckeye – Signal optimization on Yuma Rd. and Watson Rd. corridors.
- Town of Gilbert – Signal optimization on Higley Rd. and Baseline Rd. corridors.
- City of Glendale – Signal optimization on 67th Ave. from Union Hills to Parkside Ln.
- MCDOT – Signal optimization on Riggs Rd. and Alma School Rd. corridors.
- City of Phoenix (with ADOT) – Signal optimization on Dunlap Ave. and Peoria Ave. corridors.
- City of Phoenix – Signal optimization on Southern Ave. from 19th Ave. to 24th St.
- City of Scottsdale – Signal Optimization on Thompson Peak Pkwy., 94th St. and 92nd St. corridors.

- City of Surprise – Signal optimization on Greenway Rd. from Dysart Rd. to Cotton Ln.
- City of Tempe – Signal optimization on Broadway Rd. from 48th St. to Loop 101.

A total of \$402,000 was requested, exceeding the available amount of \$300,000. Committee members were asked to review the project applications and submit rankings to MAG staff numbering 1 for most preferred to 11 for least preferred. Rankings must be submitted by 10 AM on Monday, October 17th. MAG staff will compile the rankings and develop a composite ranking of all project applications to be presented to the Committee at the Special Meeting scheduled for 2 PM on October 17th. The Committee will vote on the recommended projects based on the composite ranking under available funding. The recommendation of projects will be included in the MAG process for approval through November 2016. Task order development will occur throughout December and January 2017. It is anticipated that projects will be executed from February through June 2017.

Rajnish Gupta with Town of Gilbert inquired on the two additional projects scheduled. The Synchro workshop is conducted every year with agencies identifying the number of requested seats on the TSOP applications. Based on previous feedback the workshop may be restructured to accommodate beginner and advanced users. The Before and After Evaluation study is detailing the benefits of three of the projects.

Allan Galicia with City of Glendale identified the different costs of the projects based on the total number of intersections. In response, Sarath Joshua stated that MAG staff has reviewed previous TSOP projects over the past several years and identified an average range of \$2,500-\$3,000 per intersection. Leslie Bubke with City of Scottsdale identified the variance between the types of TSOP projects. Avery Rhodes with City of Mesa pointed out that some project cost estimates exceeded the average rates. Micah Henry responded that staff coordinated with proposing agencies to identify potential constraints and arrive at the best estimates. There is flexibility within the scope of work to reduce tasks to keep within the approved budget. MAG staff is leveraging the experience of the local agencies when developing the scopes of work for TSOP projects. Chair Riegel with City of Phoenix asked what happens to the remaining funds available for TSOP projects. Sarath Joshua explained that any unused funds will be available for the next iteration of programming TSOP projects in FY2018.

6. Test of Adaptive and Responsive Ramp Metering on SR-51

Chair Riegel invited Dave Riley of ADOT to present on the testing of the adaptive and responsive ramp metering algorithm along the SR-51 freeway. Reza Karimvand arrived and joined towards the end of this discussion. ADOT has deployed traffic responsive metering for the northbound lanes of SR-51 from I-10 to Loop 101. The project fully utilizes existing ramp meter system capabilities. The ramp meter program automatically selects the best metering rate based on freeway congestion and queuing at the ramp meter. Metering rates are slower than the previously timed rates. Before-and-after evaluations for delay will be performed, and safety, fuel use, and air quality impacts will be evaluated in the future.

Sarath Joshua with MAG stated that the proposed adaptive metering scheme seemed very similar to that designed for the FMS many years ago. Dave Riley responded that it is indeed the same algorithm and that it was not widely implemented on the FMS until now. Chair Riegel inquired on the review of start and stop times for the metering. For current

operations the start time is fixed at 3:00 PM and the stop time is based on freeway recovery. The system is capable of stopping any time between 6:00 PM at the earliest and 7:00 PM at the latest. Avery Rhodes with City of Mesa inquired about ramp meter operation during holidays. Dave Riley responded that ramp meters will not be in use on major holidays. Chair Riegel inquired about operations following the Before and After evaluation. The capabilities for variable start times and resuming metering following end times will be explored following the initial deployment of the system. Sgt. Cartier with DPS inquired if the system could track ramp meter compliance rates. The system software does not have a functioning compliance tracking component, which is under review. The software is McCain Ramp Meter Software.

For the southbound lanes of SR-51 from Loop 101 to Loop 202, ADOT has deployed corridor adaptive ramp metering. This system involves upstream and downstream ramp meters working together. Metering will be increased or decreased on adjacent ramps based on congestion and ramp queuing. To proactively respond to congestion, individual ramp meters are coordinated with downstream congestion and meter ramps to meet freeway capacity. The project components including hardware, software, consultant time, and ADOT staff time cost less than \$100,000. This included new plug-and-play processor chips and software for existing controllers and new central control software by Intelight. The Intelight system uses a custom algorithm developed for SR-51. Before-and-after evaluations for delay will be performed, and safety, fuel use, and air quality impacts will be evaluated in the future. The start time of 6:00 AM is based on historical data.

Chair Riegel inquired on the comparison for the evaluation of the two systems. The systems will not be compared against each other. Freeway operations will be reviewed before deployment and after deployment for both directions. The future of the rollout of the ramp meter system will be based on the results of these pilot deployments. Results from the analysis will be reviewed early 2017 followed by analysis. As ADOT resources are limited and the project is being conducted with in-house staff, project updates will be provided on the status. Avery Rhodes clarified the differences between the two systems. Peer-to-peer communications will be utilized by the adaptive Intelight system, distinguishing it from the responsive McCain system that only uses the local detection. Mohamed Youssef with Town of Queen Creek asked about any other deployments of these systems nationwide. Other agencies have deployed different systems. Sarah Joshua with MAG inquired on when the After study will be conducted. There isn't a fixed target date. As the system is being implemented the study will be conducted following the planning and implementation. For a safety comparison Mr. Joshua recommended a target date to review data for the entire corridor. Yingyan Lou with ASU volunteered the ITE ASU Student Chapter for any analysis efforts or research components. ADOT staff will coordinate for the effort.

7. Regional Community Network Report

Chair Riegel invited Ryan Gish with MAG to report on the latest RCN developments. Ryan Gish stated that with consideration for participants' time the RCN Working Group will be meeting on a quarterly basis from now on. MAG staff coordinated with staff from ADOT, City of Avondale, and City of Goodyear to complete connections to the RCN. Next week Maricopa Region 911 will establish its connection with those agencies at PD locations. MAG staff is coordinating with City of Tolleson and City of Goodyear for the PSAP connection for 911 communications. MAG staff is exploring available

fiber optic and wireless network connections with City of Goodyear to establish connectivity to City of Litchfield Park in order to provide redundancy and data backup.

8. Reports by Committee Members

Chair Riegel called on members to report items of interest to the committee. April Wire with Maricopa County provided an update on Bell Road Adaptive Traffic Signal Timing. The RFP was finalized and there are three identified vendors for the four project areas. Kick-off meetings were conducted for each of the four project areas. The time frame for final design and bids for construction by the end of this year. Construction is anticipated for early 2017. Chair Riegel with City of Phoenix stated that design work has begun on the downtown traffic management system. This includes Anonymous Re-Identification (ARID) devices and cameras deployed throughout downtown with a specific focus on special events. Leslie Bubke with City of Scottsdale stated that city staff is coordinating with MCDOT for the portion of the Bell Road Adaptive Traffic Control project within city limits. The fiber optic network connection to the TMC is partially completed and will be finalized for the concurrent project. Avery Rhodes with City of Mesa stated that the bid opening for the joint ARID project with Town of Gilbert and City of Tempe is tomorrow. This will expand the existing Mesa ARID system. The project to integrate Mesa 911 CAD data with the MCDOT RADS system is underway. This project should be finalized January 2017. New controllers are being installed on the light rail alignment within the City of Mesa to improve management and operations. Allan Galicia with City of Glendale identified the upcoming 67th Avenue project involving fiber installation from Glendale Avenue to Cholla Street. There are three design projects that are nearing conclusion including, 51st Avenue ITS enhancement, data collection with count stations and ARID devices, and Maryland Avenue lane control signs. City of Glendale has just begun planning for the Final Four mega event and will be coordinating with regional partners.

9. Request for Future Agenda Items

Chair Riegel called on members to request future agenda items. There were no requests.

10. Next Meeting Date and Place

Chair Riegel noted that the next meeting will be a Special Meeting held at 2:00 p.m. on Monday, October 17, 2016, in the Cholla Room (2nd floor) at MAG for the Committee approval for recommendations for FY2017 TSOP projects. The next regular meeting will be held at 9:30 a.m. on Wednesday, November 9, 2016, in the Chaparral Room (2nd floor) at MAG. This regular meeting will be followed by a 10:30 a.m. meeting of the Technical Advisory Group for the Systems Management and Operations Study.

11. Adjournment

Chair Riegel adjourned the meeting at 10:35 a.m.