

September 29, 2015

TO: Members of the MAG Intelligent Transportation Systems Committee

FROM: Marshall Riegel, City of Phoenix, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Wednesday, October 7, 2015- **10:00 a.m.**  
MAG Office Building, 2<sup>nd</sup> Floor, Ironwood Room  
302 North First Avenue, Phoenix

The ITS Committee has been scheduled at the time and place noted above. Committee members or their proxies may attend **in person or by video conference or by telephone conference call**. Those attending by telephone conference call please contact MAG offices for conference call instructions.

Please park in the garage under the MAG building, bring your ticket, parking will be validated. For those using transit, Valley Metro/RPTA will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.

In 1996, the Regional Council approved a simple majority quorum for all MAG advisory committees. If the ITS Committee does not meet the quorum requirement, members who have arrived at the meeting will be instructed a legal meeting cannot occur and subsequently be dismissed. Your attendance at the meeting is strongly encouraged.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Jason Stephens at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

If you have any questions regarding the meeting, please contact Sarath Joshua at (602) 254-6300.

TENTATIVE AGENDA

	<u>COMMITTEE ACTION REQUESTED</u>
<p>1. <u>Call to Order</u></p> <p>For the October 7, 2015 meeting, the quorum requirement is 10 committee members.</p>	
<p>2. <u>Approval of the September 2, 2015 ITS Committee Meeting Minutes</u></p>	<p>2. Review and approve minutes of the meeting held on September 2, 2015.</p>
<p>3. <u>Call to Audience</u></p> <p>An opportunity will be provided to members of the public to address the ITS Committee on items not scheduled on the agenda that fall under the jurisdiction of MAG, or on items on the agenda for discussion but not for action. Members of the public will be requested not to exceed a three minute time period for their comments. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the ITS Committee requests an exception to this limit. Please note that those wishing to comment on action agenda items will be given an opportunity when the item is heard.</p>	<p>3. For information and discussion.</p>
<p>4. <u>Program Managers Report</u></p> <p>The following items will be discussed:</p> <ul style="list-style-type: none"><li>• Status of FY2015 TSOP Projects</li><li>• Status on I-10 ICM Deployment Planning Study - Phase 1</li><li>• Status on US-60/Grand Avenue Traffic Management Plan</li><li>• Status Report on the RCN</li></ul>	<p>4. For information and discussion.</p>
<p>5. <u>City of Tempe Request for Combination of Projects in FY2016 &amp; FY2017</u></p> <p>The City of Tempe has two upcoming TIP projects to construct a fiber backbone along Rural Road. The first project in FY2016 will construct a fiber backbone along the north half of the City. The second project in FY2017 and will construct a fiber backbone</p>	<p>5. For information, discussion and possible action to approve the combination of the two fiber-optic projects into one TIP project in FY2017.</p>

along Rural Road in the southern half of the City.

Both TIP projects are included in one design contract that is currently underway. The City of Tempe has requested to defer the first project in FY2016 to FY2017 and to create one combined project that will encompass the fiber backbone construction for all of Rural Road. This would allow the project to save time, money and have it executed more efficiently.

Upon committee approval, the combined project will be listed in the FY2017 MAG TIP.

6. FY2018-2019 TIP Project Evaluation Process & Project Presentations

A total of 29 ITS project applications were received seeking CMAQ funds in FY2018 & 2019 (See Attachment One). The total amount of CMAQ available in each year is \$3.68 million. All ITS project applications were posted at the MAG website on Wednesday September 23, 2015. Committee members were requested to download project applications and review them prior to this meeting, in preparation for project presentations by the lead agencies. An Excel-based ITS Project Evaluation Form has been provided to all evaluators.

Each project will be briefly presented to the committee by the lead agency. A total of 5 minutes per project will be provided. Agencies with projects with multiple phases may combine them into one presentation. Each presentation will be followed by questions and answers.

Committee members are requested to complete the project review process by entering evaluation scores for CMP and for Safety on the Evaluation Form. Air quality scores will be provided to each evaluator on October 22nd. The completed evaluation forms should be submitted to MAG by Noon on Monday October 26, 2015.

6. For information and discussion.

The final list of ITS projects to be recommended by the committee will be generated at the next committee meeting on November 4, 2015.

7. Reports by Committee Members

Members will be provided an opportunity to share information related to ongoing ITS activities in their jurisdictions.

8. Request for Future Agenda Items

Topics or issues of interest that members of the committee would like to have considered for discussion at a future meeting will be requested.

9. Next Meeting Date and Place

The next meeting is scheduled to be held at 10:00 a.m. on Wednesday, November 4, 2015. It will be held in the Ironwood Room on the 2<sup>nd</sup> Floor of the MAG office building.

Adjournment

7. For information and discussion.

8. For information and discussion.

9. For information.

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

September 2, 2015

MAG Ironwood Room, 2nd Floor  
302 North First Avenue  
Phoenix, Arizona

**MEMBERS ATTENDING**

Reza Karimvand, ADOT	Luke Albert, City of Goodyear
# Yingyan Lou, ASU	Nicolaas Swart, Maricopa County
Chris Hamilton, City of Avondale	# Avery Rhodes, City of Mesa
Jason Mahkovtz, City of Buckeye	# Ron Amaya, City of Peoria
Mike Mah, City of Chandler	Marshall Riegel, City of Phoenix
Captain Burley Copeland, DPS	* Steve Ramsey, City of Scottsdale
Bryce Christo, City of El Mirage	Albert Garcia, City of Surprise
* Toni Whitfield, FHWA	David Lucas, City of Tempe
# Leslie Bubke, Town of Gilbert	Abhishek Dayal, Valley Metro
* Debbie Albert, City of Glendale	

**OTHERS PRESENT**

Sergeant John Paul Cartier, DPS	Dan Hartig, Ayres
Lisa Burgess, Kimley-Horn	Tim Wolfe, Dibble
Anita Johari, ASJ	Scott Kelley, AMEC
Jeff Jenq, OZ Engineering	James Adamec, MAG
Srini Goundla, PB	Margaret Boone, MAG
Sandra Thoms, Jacobs	Ryan Gish, MAG
Don Tappendorf, TEC	Micah Henry, MAG
Arnab Gupta, AECOM	Sarath Joshua, MAG
Don Wiltshire, YSMA	Eric Nava, MAG
Sarah Simpson, UCG	

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

1. Call to Order  
Chair Marshal Riegel called the meeting to order at 10:00 a.m.
  
2. Approval of the June 3, 2015 ITS Meeting Minutes  
Chair Riegel requested approval of the meeting minutes from the August 5<sup>th</sup> ITS Committee meeting. **Reza Karimvand from ADOT moved, Bryce Christo from City of El Mirage seconded and it was unanimously carried to approve the minutes of the meeting held on August 5, 2015.**

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 his report:
  - Status of TSOP Projects:  
For Fiscal Year 2014, the total of 11 TSOP projects at a contracted cost of \$337,200 have been completed. The cost to complete all projects was \$332,700. The FY2015 TSOP projects include 11 projects for a total cost of \$302,227. Nine projects have been completed. The I-10 Integrated Corridor Management (ICM) project for I-10 from 35<sup>th</sup> Avenue to 83<sup>rd</sup> Avenue is expected to start later in September 2015. The Before and After Evaluation project for three TSOPs is scheduled to be completed by December. It is anticipated that there will be a call for projects in the near future; this will be discussed at the next meeting.
  
  - Next Steps for the Emergency Vehicle Pre-emption (EVP) Study  
Micah Henry was invited to discuss the next steps for the Emergency Vehicle Pre-emption (EVP) Best Practices Study. The next steps include clarifying questions and incorporating comments into the report for the Final Report. Following committee acceptance of the Final Report, planning will begin for the next steps for follow-up action including a regional workshop for EVP stakeholder discussion.
  
  - Status Report on the Regional Community Network (RCN)  
Ryan Gish was invited to provide an update on the latest RCN developments. There was a network update in response to some recent outages due to inclement weather. An additional point of redundancy was provided to the Maricopa Region 911. Expansion is planned to agencies not currently connected, including Queen Creek and Salt River Pima-Maricopa Indian Community via City of Mesa connections. The Bell Road and Grand Avenue construction will require an alternate path during construction activities. The video management software pilot project using the Luxriot software was a success and will be expanded through additional licenses. The fiber mapping project is in the test phase for security purposes.
  
5. FY2018-2019 TIP Applications & Project Evaluation Process  
Chair Riegel invited Sarath Joshua to discuss the current round of TIP applications for ITS projects. Applications are due on Monday, September 21<sup>st</sup> at 10AM. A total of \$3.68M per year in FY2018 and FY2019 in CMAQ funds is available. The recommended project size is \$400,000. Larger projects may be submitted in multiple phases and, upon approval for programming, these multiple phases of the same project can be merged into a single TIP project, to avoid multiple ADOT administration fees. There will be one TRACS number applied to the approved projects. MAG staff will be responsible for unifying multi-phased projects into a single project.

Chair Marshall with City of Phoenix inquired on the viability of projects if multiple

phases are not all advanced. If only one phase of a multi-phased project is approved from programming, it will be up to the decision of the local agency submitting the application to continue with the programming of the project or withdraw the application. If a project is withdrawn the next ranked project will then be programmed.

Abhishek Dayal with Valley Metro inquired about the overall project funding. The amount of CMAQ funds requested for a single project cannot exceed \$400,000, but the overall project cost can go higher. The necessary additional project funding exceeding the \$400,000 will be the responsibility of the local agency in the form of a local match percentage.

Mr. Joshua provided a review of the TIP application form for ITS projects. Essential requirements for the applications include compliance with the Regional ITS Architecture, identification of the regional priority in the 2012 MAG ITS Strategic Plan for the project's proposed improvement, and identification of the location of the proposed project to be located within the CMAQ eligible area.

The project evaluation criteria includes the Congestion Management Process (CMP) score (comparing against the 6 CMP objectives), the Air Quality Score (emission reduction potential to be provided by the Air Quality TAC), and the Safety Score (potential to improve safety).

Mr. Joshua reviewed the ITS Project Application format. There are four project categories: Local ITS plans, ITS applications that improve safety, Integrated Corridor Management (ICM) applications, and Arterial ITS applications. These four categories are explained in the 2012 MAG ITS Strategic Plan. The project information also shall include project title and sponsor, goals and objectives, scope and a map of the project area, identification of relevant ITS service packages for the MAG Regional ITS Architecture and appropriate architecture flow diagrams, the program fiscal year for funding, the project budget and cost estimate, required system maintenance and operations, and the signature page for the compliance statement for the systems engineering analysis requirements.

Mr. Joshua reviewed the ITS project evaluation schedule:

- Sept. 21<sup>st</sup>: Applications received by MAG.
- Sept. 22<sup>nd</sup>: Applications provided to the ITS Committee along with the evaluation form (without the Air Quality component) for review.
- Oct. 7<sup>th</sup>: 5-minute presentations to the ITS Committee followed by a 5-minute question and answer period.
- Oct. 22<sup>nd</sup>: Air Quality scores are completed by the Air Quality Technical Advisory Committee (TAC).
- Oct. 23<sup>rd</sup>: Air Quality scores provided to the ITS Committee to be added to the evaluation forms, generating final rankings for individual members.
- Oct. 26<sup>th</sup> at 10 AM: Finalized evaluation forms are due to MAG staff to combine rankings.
- Nov. 4<sup>th</sup>: ITS Committee members review the final rankings and establish recommendations for programming projects.

Mr. Joshua reviewed the project evaluation spreadsheet with the scoring components. The project evaluation criteria includes the Congestion Management Process (CMP)

score (comparing against the 6 CMP objectives), the Air Quality Score (emission reduction potential to be provided by the Air Quality TAC), and the Safety Score (potential to improve safety). The ITS Committee members will assign values to the CMP score and the Safety score. The three scores will form the Combined Weighted Score. The Combined Weighted Score for the project evaluation form will be based on the CMP score for 75%, the air quality score for 15%, and the safety score for 10%. Based on the weighted scores, the individual projects will receive a ranking.

Discussion included the following resolutions:

- Each project application will be allotted 5 minutes for the presentation.
- Local agency staff should present the project to the ITS Committee. Consultants may be on hand to respond to technical questions regarding the application.
- ITS Committee members will evaluate all project applications and generate an individual project ranking, including their own agency's applications.
- For project applications with multiple phases, the application form should include a map that defines the project limits for each phase.

6. Preliminary Results from Improved Freeway Traffic Incident Management (TIM)

Chair Riegel invited Sergeant John Paul Cartier with DPS to present the initial improvements to traffic incident management (TIM) on freeway operations and emergency response. Sgt. Cartier reviewed the DPS ADOT Traffic Operations Center (TOC) Co-Location program and the results over the last year. The four key components for the project included establishing the interagency government agreement, allocating staff, procuring and installing equipment, and documenting performance measures. The performance measures are expected for presentation for the annual audits to the MAG Regional Council.

Sgt. Cartier reviewed the documentation of the performance measures for collisions, including non-injury, injury, and fatal collisions. For non-injury collisions, roadway clearance times were reduced by 56% and incident clearance times were reduced by 50%. For injury collisions, roadway clearance times were reduced by 54% and incident clearance times were reduced by 30%. For fatal collisions, roadway clearance times were reduced by 46% and incident clearance times were reduced by 8%. In each case the increase in response times was attributed to the increase of daily traffic volumes, the increase of the number of calls and collisions, camera verification of the call out, and the consistency of the number of DPS officers.

Sgt. Cartier presented the collision comparison data for January to July between 2014 and 2015, using the most current data available. The number of non-injury collisions increased 15%, the number of injury collisions increased 10%, and the fatal collisions decreased 16%. When assessing the number of incidents occurring with DPS officers present in the TOC versus not at the TOC, there were 27% more non-injury collisions, 21% more injury collisions, and 11% fewer fatal collisions.

TOC DPS officers used ADOT CCTV cameras to verify roadway incidents leading to:

- Officers adjusting their response based on the type of incident.
- Officers verifying emergency vs non-urgent response, downgrading or elevating the initial response level.
- Officers safely completing their current enforcement actions and assisting on additional calls for service, debris/motorist assist, while en-route if a collision is

non-injury, not blocking, or is removed from mainline.

- Improving trooper and public safety.
- Reducing department liability, helping to minimize unnecessary emergency responses.

TOC DPS officers also fully utilize the DPS CAD system, statewide radio communications equipment, and telephone capabilities to directly communicate with dispatch centers and field officers. This reduces communication delays and increases the effectiveness of emergency and investigation responses. Both TOC operators and DPS officers utilize ITS to inform the traveling public. TOC DPS officers apply TIM strategies to reduce congestion and secondary collisions.

The benefits of the co-location program include expedited mobilization of correct resources, reduced response times, reduced clearance times, traffic queue monitoring, unrestricted DPS CAD access, timely incident updates, and improved first responder and public safety. DPS officers significantly increase effective coordination efforts while serving as a point of contact for incident commanders, first responders, the public and the media.

7. Reports by Committee Members

Chair Riegel called on members to report items of interest to the committee. Reza Karimvand with ADOT updated the Committee on the changes regarding TSM&O at ADOT. The organization is restructuring into a single department called System Management and Operations and will begin operations on October 1<sup>st</sup>. ADOT staff responded to the recent storms in reviewing protocols for traveler information and cooperation with the City of Phoenix. David Lucas with City of Tempe detailed the fiber interconnect that is ready for construction including CCTV cameras and additional wireless infrastructure. There is another project that will install fiber on Elliot Rd. from Loop 101 to I-10. Chair Riegel with City of Phoenix thanked MAG staff Ryan Gish for assisting with connectivity during the upgrade of the city's signal system software. Jason Mahkovtz with City of Buckeye will be the interim representative for city. Ron Amaya with the City of Peoria is installing traffic signal interconnect and thanked MAG staff Ryan Gish for assisting with the city's firewall equipment.

8. Request for Future Agenda Items

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

9. Next Meeting Date and Place

Next meeting date was announced at 10:00 a.m. on Wednesday, October 7, 2015, in the Ironwood Room (2<sup>nd</sup> floor) at MAG.

10. Adjournment

Chair Riegel adjourned the meeting at 11:15 a.m.

**FY2018 & FY2019 Proposed ITS Project List**

#	Lead Agency	Project Number	Preferred Program Year	ITS Project Category	Project Description	CMAQ Funds Requested	
						FY 2018	FY 2019
1	Apache Junction	APJ-18-ITS-1	FY2018	Arterial ITS	Install wireless communication to all Apache Junction traffic signals	\$267,340	
2	Apache Junction	APJ-19-ITS-2	FY2019	Arterial ITS	Connect traffic signals via fiber communications accessible from City Hall		\$351,047
3	Avondale	AVN-18-ITS-1	FY2018	Arterial ITS	Install fiber backbone to connect two existing backbone runs on Dysart Rd fiber	\$278,279	
4	Avondale	AVN-19-ITS-2	FY2019	Arterial ITS	Install fiber backbone on Van Buren Street from Dysart Rd to 127th Ave		\$301,477
5	Chandler	CHN-18-ITS-1	FY2018	Arterial ITS	Install bicycle detection system for 20 signalized intersections along Chandler Blvd	\$396,060	
6	Chandler	CHN-19-ITS-2	FY2019	Arterial ITS	Install bicycle detection system for 20 signalized intersections along Ray Rd		\$396,060
7	El Mirage	ELM-18-ITS-1	FY2018	Arterial ITS	Install fiber , install five CCTV cameras and interconnect six traffic signals	\$305,721	
8	Goodyear	GDY-18-ITS-1	FY2018	Arterial ITS	Phase 1 - Install fiber along Elwood St, CCTV, connect two signals to TMC	\$380,683	
9	Goodyear	GDY-18-ITS-2	FY2018	Arterial ITS	Phase 2 - Install fiber along Cotton Ln, CCTV, connect four signals to TMC	\$301,482	
10	Goodyear	GDY-19-ITS-3	FY2019	Local ITS Plans	Update ITS strategic plan and implementation plan		\$188,600
11	Glendale	GLN-18-ITS-1	FY2018	Arterial ITS	Install fiber, communication and CCTV along Camelback Rd from 51st Ave to 67th Ave	\$400,000	
12	Glendale	GLN-18-ITS-2	FY2018	Arterial ITS	Install fiber, communication and CCTV along Camelback Rd from 75th Ave to 91st Ave	\$400,000	
13	Glendale	GLN-18-ITS-3	FY2018	Arterial ITS	Install EVP system citywide at 48 intersections	\$399,832	
14	Maricopa City	MAR-18-ITS-1	FY2018	Arterial ITS	Install conduit & fiber, CCTV cameras, & wireless comm. and interconnect 6 signals	\$400,000	
15	Maricopa City	MAR-19-ITS-2	FY2019	Arterial ITS	Install conduit & fiber, CCTV cameras, & wireless comm. and interconnect 9 signals		\$400,000
16	Maricopa County	MMA-18-ITS-1	FY2018	Integrated Corridor Mgmt	Upgrade TMC workstations, video wall display, network equipment, and system	\$299,874	
17	Maricopa County	MMA-19-ITS-2	FY2019	Integrated Corridor Mgmt	Upgrade RADS server and hardware and provide system integration		\$122,590
18	Mesa	MES-18-ITS-1	FY2018	Arterial ITS	Install cabinets & controllers at 25 locations and establish communications	\$390,000	
19	Mesa	MES-19-ITS-1	FY2019	Arterial ITS	Install cabinets & controllers at 25 locations and establish communications		\$390,000
20	Peoria	PEO-18-ITS-1	FY2018	Arterial ITS	Install 72 flashing yellow arrow signal heads & cabinet and controllers at 12 locations	\$358,340	
21	Phoenix	PHX-18-ITS-1	FY2018	Integrated Corridor Mgmt	Install vehicle detection at 182 locations	\$895,000	
22	Phoenix	PHX-19-ITS-2	FY2019	Arterial ITS	Install 5 miles of fiber and vehicle detection at 25 locations		\$749,067
23	Scottsdale	SCT-18-ITS-1	FY2018	Arterial ITS	Install 17 video detection cameras and TMC software	\$368,713	
24	Surprise	SUR-18-ITS-1	FY2018	ITS Applications that Improve Safety	Develop EVP and signal integration implementation plan	\$94,300	
25	Surprise	SUR-18-ITS-2	FY2018	Local ITS Plans	Develop ITS strategic plan and implementation plan	\$141,450	
26	Surprise	SUR-19-ITS-3	FY2019	Arterial ITS	Install 2 CCTV cameras and 9 video detection cameras		\$353,625
27	Surprise	SUR-19-ITS-4	FY2019	Arterial ITS	Replace unsupported TMC video wall and processor equipment		\$315,905
28	Tempe	TMP-18-ITS-1	FY2018	Arterial ITS	Phase 1 - Install DMS, CCTV cameras, wireless link, bicycle detection, & EVP networking	\$392,010	
29	Tempe	TMP-19-ITS-2	FY2019	Arterial ITS	Phase 2 - Install DMS, CCTV cameras, wireless link, bicycle detection, & EVP networking		\$392,010
Total CMAQ Funds Requested						<b>\$6,469,084</b>	<b>\$3,960,381</b>
CMAQ Funds Available						<b>\$3,680,000</b>	<b>\$3,680,000</b>
Difference						<b>-\$2,789,084</b>	<b>-\$280,381</b>