

PART A - CONTACT INFORMATION	
1. Sponsoring Agency	City of Phoenix
2. Contact Name	Marshall Riegel P.E.
3. Phone	602 534 5351
4. E-Mail Address	marshall.riegel@phoenix.gov
5. Mailing Address	200 W. Washington St., 6th Floor Phoenix, AZ 85003
(OPTIONAL)	
<a href="#">GIS Submittal Instructions</a>	

**PART B - CMAQ Score Data**

This part of the form is used to gather project related data to calculate an CMAQ Score and also gather the minimum data needed for a listing of the project in the Transportation Improvement Program

**Federal Funding Eligibility**

All ITS projects to be funded with Federal CMAQ funds must be located within a nonattainment area. Please use the map provided in the tab named "Map" to verify that the project is located in a nonattainment area.

**1. Traffic Estimate and Roadway Characteristics**

a. Current Average Daily Traffic (ADT) on the Facility or the Nearest Parallel Facility of a Similar Type:

b. Please Describe how the ADT was estimated:

c. When was the ADT estimate developed:

d. Name of the Roadway Section Used for the ADT Estimate:

e. Starting Limit of the Roadway Section:

f. Ending Limit of the Roadway Section:

g. Length (Miles)

h. Total Number of Through Lanes on the Roadway Section:

i. Federal Functional Classification of the Roadway Section:   
[Link to Functional Classification Update at the MAG Website](#)

**2. Improvements in Traffic Management & Operations.**

a. Enter the pre-improvement (current) avg corridor traffic speed:

b. In the Table Check the Box in The Row That Best Describes the Project (Check Only One Box):

	Before (Pre-Improvement) Condition	After (Post Improvement) Condition	Expected Increase In Speed
<input type="checkbox"/>	Interconnected, pre-timed signals with old timing plan	Advanced computer-based control	17.5 percent
<input type="checkbox"/>	Non-interconnected signals with traffic-actuated controllers	Advanced computer-based control	16.0 percent
<input type="checkbox"/>	Interconnected, pre-timed signals with actively managed timing	Advanced computer-based control	8.0 percent
<input checked="" type="checkbox"/>	Interconnected, pre-timed signals with various forms of master control and various qualities of timing plans	Optimization of signal timing plans. No change in hardware	12.0 percent
<input type="checkbox"/>	Non-interconnected, pre-timed signals with old timing plan	Optimization of Signal Timing Plans	7.5 percent

NOTE: All ITS projects MUST involve eligible infrastructure improvements.

**3. Other Improvements. Check all that apply:**

Traffic signal system improvements at a single agency

<b>PART B - CMAQ Score Data</b>	
<input checked="" type="checkbox"/>	Traffic signal system improvements that apply to more than one agency
<input checked="" type="checkbox"/>	Includes improvements to coordination between arterial and freeway traffic operations
<input checked="" type="checkbox"/>	Project conforms to local land use plans
<input type="checkbox"/>	Adds features to traffic signals that would better accommodate seniors at pedestrian crossings
<b>4. Traffic Flow Improvement Due to Project (Not required for Traffic Mgmt &amp; Operations Improvements)</b>	
a. Enter the pre-improvement (current) average traffic speed of the corridor:	<input type="text"/>
b. Enter the post-improvement (current) average traffic speed of the corridor:	<input type="text"/>

**PART C1 - ITS Project Information**

**Please enter information ONLY in highlighted cells**  
**Links to various websites are provided for additional information and help**  
**The worksheet titled "Part C Example" shows an example on how to enter information**

**Integrated Corridor Mgmt** ▼

**A. Project Title & Sponsor**

<b>Lead Agency</b>	City of Phoenix
<b>Other Partnering Agencies</b>	ADOT
<b>Project Title</b>	Central Core ARID Phase 2
<b>Project Category</b>	Integrated Corridor Mgmt

**B. Project Goals & Objectives**

**Project Goals:**  
 Acquire real time traffic conditions along corridors paralleling and traversing routes along SR51 for the south half of the city so that traffic signal optimization and timing plans are developed based on actual continuous data acquisition so that real-time traveler information on major corridors in advance of key decision points is available to allow motorists to seek alternate routes during recurring or non-recurring congestion occurrences. Traffic data will be shared through the RADS for use with regional governmental agencies.

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**Project Objectives:**  
 Acquisition of network traffic conditions enables advanced traffic management decisions to be made based on actual traffic conditions allowing for signal timing changes and observance of field conditions on a 24 hours 7 days a week basis to isolate under-performing links and intersections so that limited resources can be applied to known trouble locations thereby allowing for improved travel time along the corridors, reduced congestion, decreased delay and the subsequent decreased energy consumption and air quality improvement. Using analytics tools, the TMC staff can reduce delays and improve travel times with increased throughput, vehicle hour time reduction and travel times savings. The devices will greatly reduce travel time variability by improving traffic management through providing travel time to the RADS system. The project will result in improved connectivity within the city and the region by providing travel time data through the RADS system. With the quantum leap forward in traffic condition data provided through this deployment it is expected that levels of service will improve with the resulting high impact to reductions in congestion. This will provide system wide benefits and have a high benefit cost ratio when computing potential delay cost reductions.

**C. Project Information**

**Project Location Description - a PDF file of a map must be submitted to MAG as an attachment:**  
 Traffic data acquisition equipment will be deployed to arterials adjacent to SR51 and traversing SR51. This project will also include arterials along and adjacent to and traversing corridors of media interest.

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**Scope of the Project:**  
 Procure and provision and integrate traffic data acquisition devices at intersections along corridors adjacent and parallel to as well as traversing the SR 51. Additionally traffic data acquisition devices will be deployed along and traversing corridors of media interest.

**PART C1 - ITS Project Information**

**D. Identify Project Components in MAG Regional ITS Architecture**

Service Area	Addressed in this Project (Yes or No)	<a href="http://www.azmag.gov/ITS/">Applicable ITS Service Packages http://www.azmag.gov/ITS/</a>	NOTE: Insert the relevant Architecture Flow Diagrams in worksheet: Part C-ITSArchFlowDiags
1. Traffic Management	Yes	ATMS01,ATMS03	
2. Public Transportation			
3. Communications	Yes	ATMS03, ATIS01	
4. Traveler Information	Yes	ATMS01, ATMS06, ATIS01	
5. Archived Data Mgmt	Yes	ATMS03, ATMS07	
6. ITS for Safety			
7. ITS Planning			
8. Fwy-Arterial Operations	Yes	ATMS01, ATMS03, ATMS06, ATMS07, ATMS09	

**E. Program Year Preference (enter FY2018 oor FY2019)**

Preferred program FY

**F. Project Budget**

	Federal Cost	Local Match (min 5.7%)	Total Cost
<b>Amount</b>	\$454,526.00	\$27,474.00	\$482,000.00
<b>Cost percentage</b>	94.3%	5.7%	

**G. System Maintenance and Operations**

Current staff resources available to support ITS operations at the local agency (in FTEs)	6
Additional staff resources required for fully utilizing features added by project (in FTEs)	0
Agency's estimated current annual ITS operations & maintenance (O&M) budget	\$50,000
Estimated additional annual O & M funds required for features added by this project	\$10,000
Estimated DATE from when required additional local O&M funds will be available	Jul-2020

**PART C1 - ITS Project Information**

**Other comments:**

**H. Systems Engineering Analysis Requirement**

**Commitment to address the federal requirement for Systems Engineering Analysis:**

Agency's intent to follow the process described in the 'V' diagram during the project development process

COP commits to follow the SEA process.

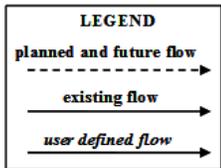
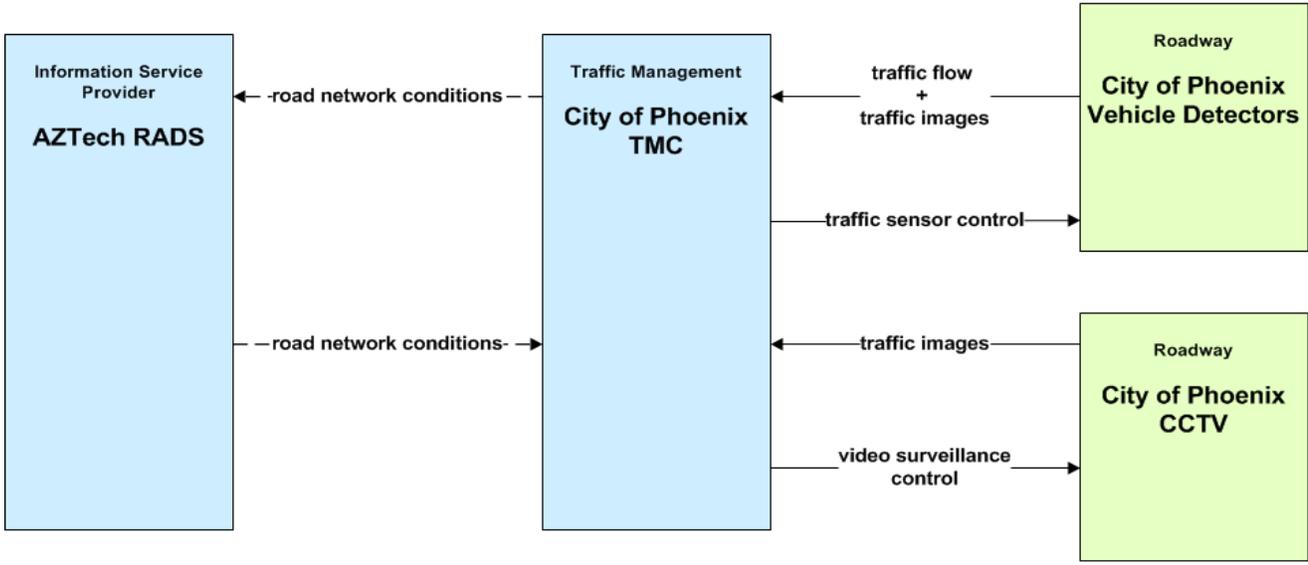
[http://azmag.gov/Documents/ITS\\_2010-11-22 ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf](http://azmag.gov/Documents/ITS_2010-11-22 ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf)

**PART C2 - ITS Architecture Flow Diagrams**

All relevant ITS Architecture Flow Diagrams MUST be inserted below for the relevant ITS Service Packages addressed by the proposed ITS project. This is to ensure that the project complies with the Regional ITS Architecture and meets a federal requirement for all federally funded ITS projects.

Insert Architecture Flow Diagrams in the space below:

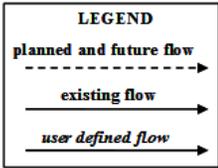
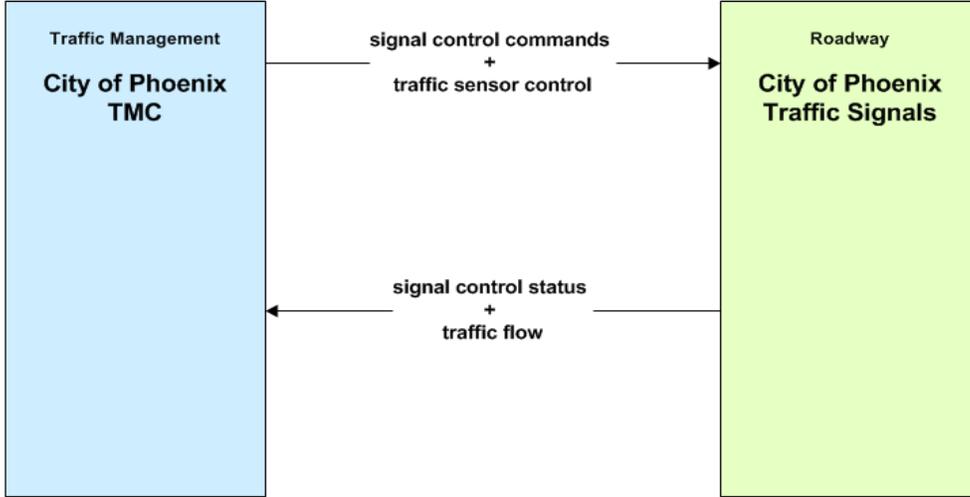
**ATMS01 - Network Surveillance  
City of Phoenix**



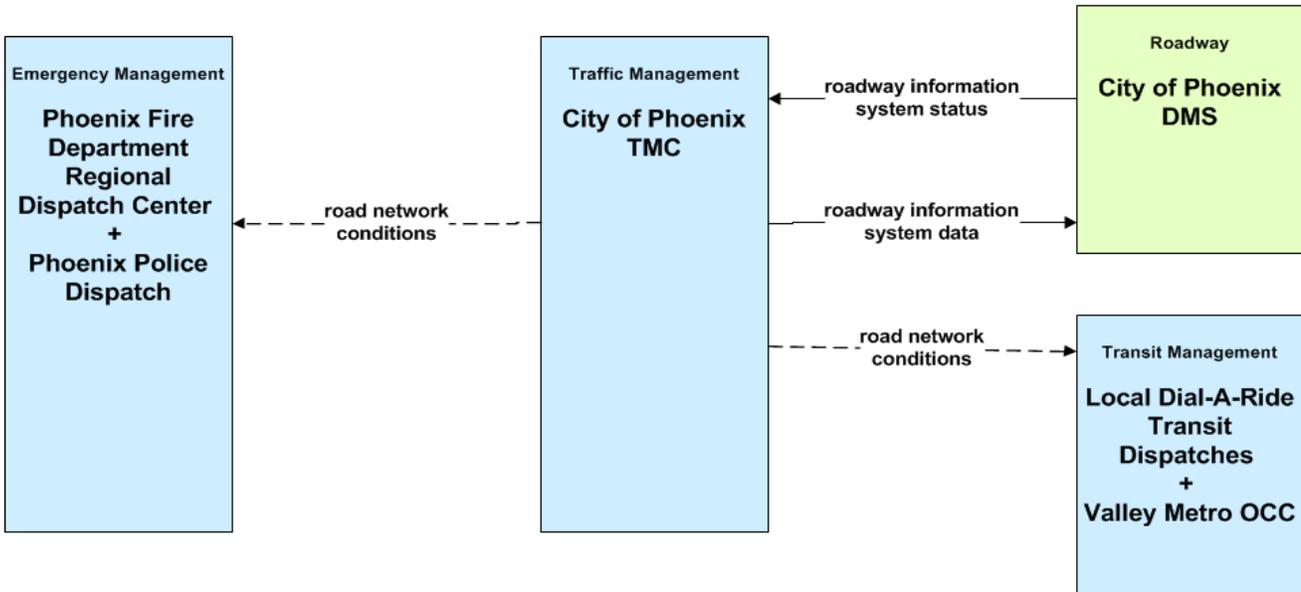
*The planned and future flows are not necessarily being funded. They may reflect the desire to have the data link from either or both sides of the stakeholders.*

**PART C2 - ITS Architecture Flow Diagrams**

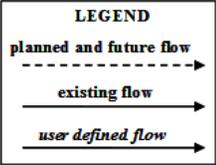
**ATMS03 - Traffic Signal Control  
City of Phoenix**



**ATMS06 - Traffic Information Dissemination  
City of Phoenix**

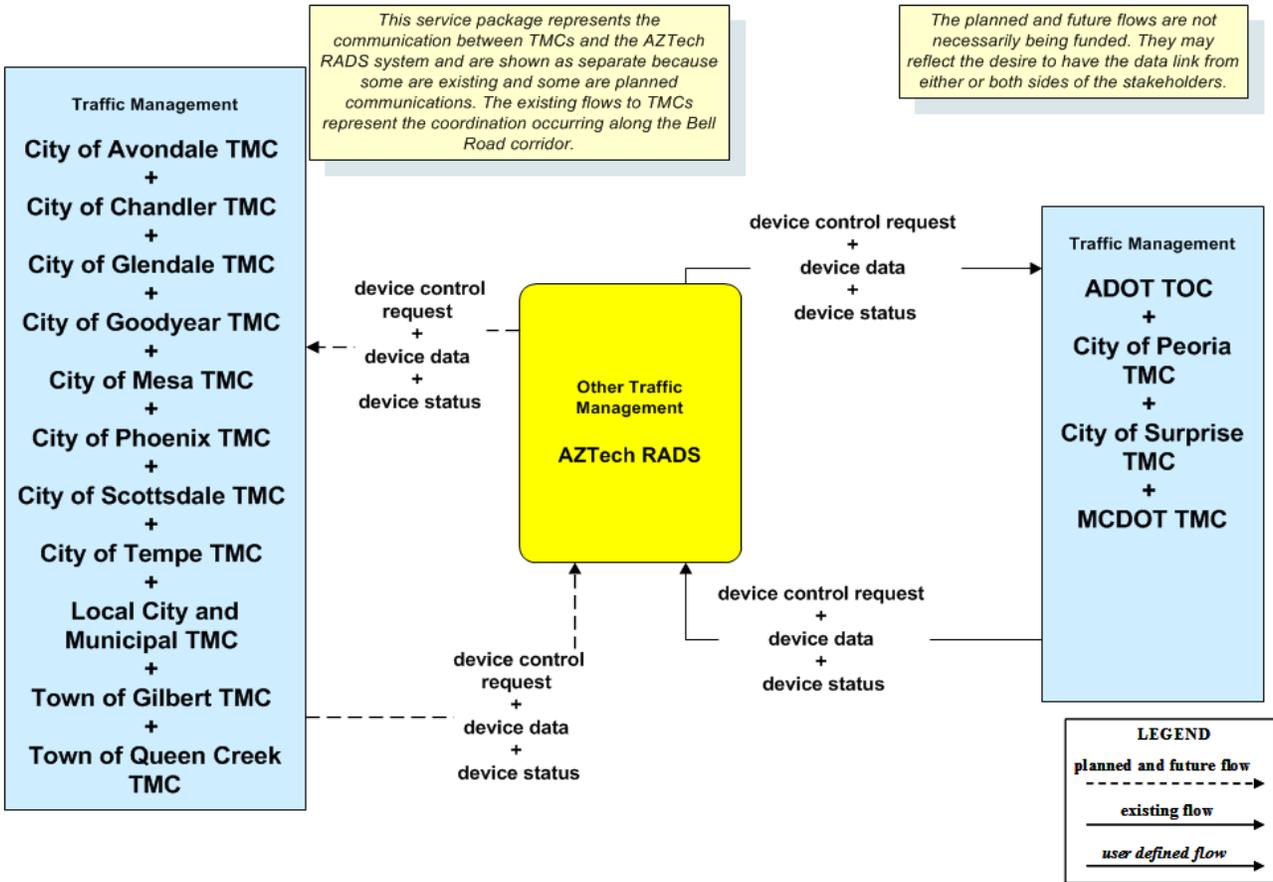


**PART C2 - ITS Architecture Flow Diagrams**



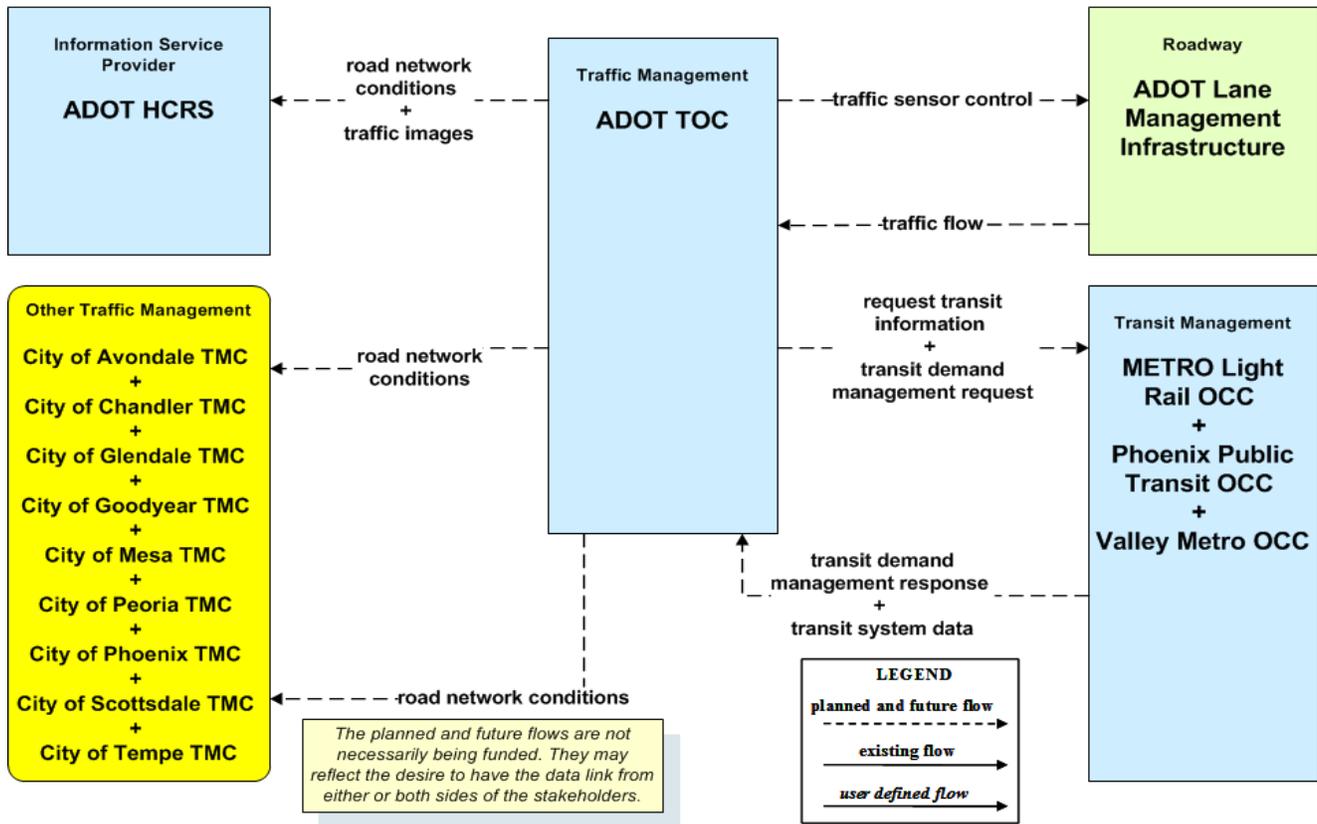
*The planned and future flows are not necessarily being funded. They may reflect the desire to have the data link from either or both sides of the stakeholders.*

**ATMS07 - Regional Traffic Management  
AZTech C2C DMS Network**

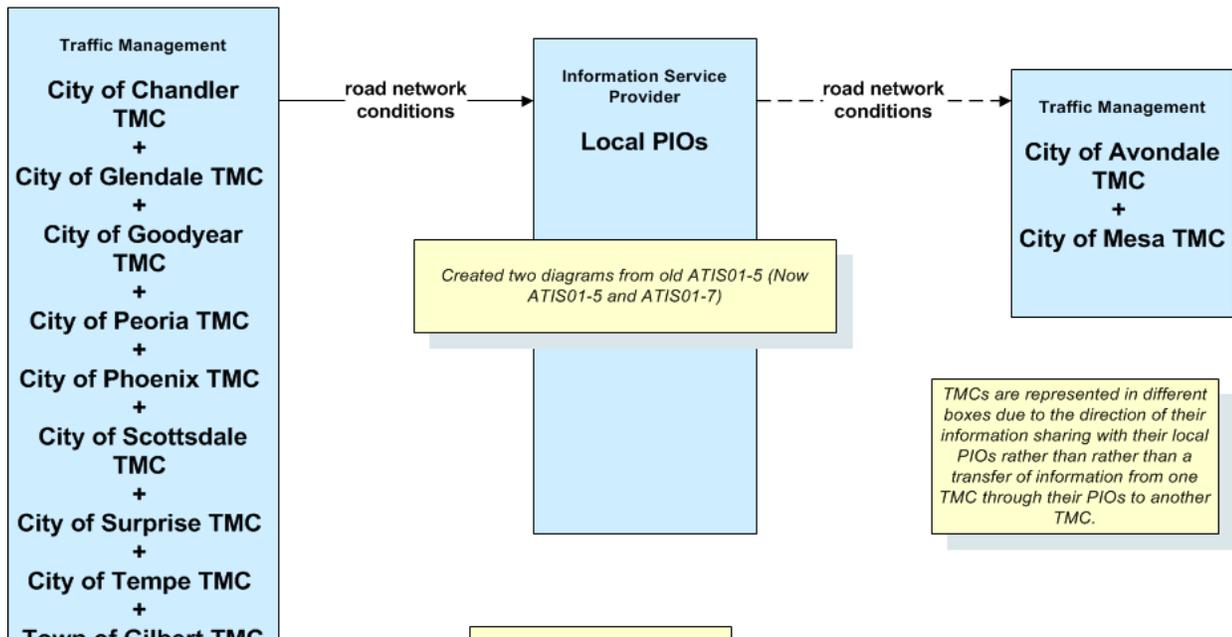


**PART C2 - ITS Architecture Flow Diagrams**

**ATMS09 – Transportation Decision Support and Demand Management  
ADOT ICM/ATM**



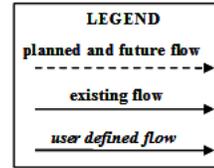
**ATIS01 - Broadcast Traveler Information  
Local Cities and Municipalities (1 of 2)**



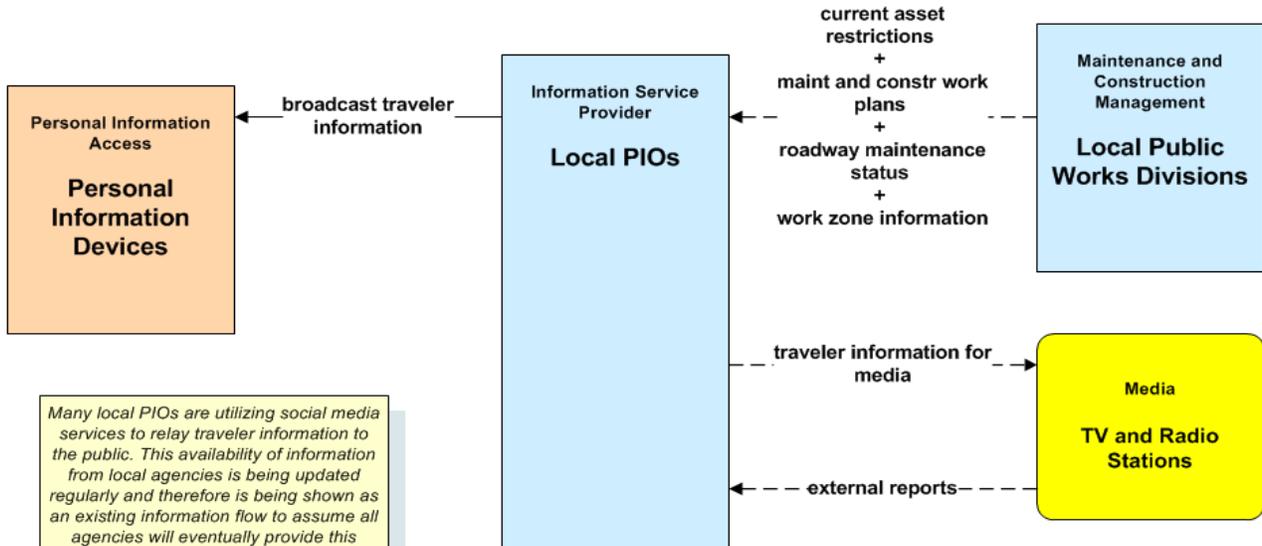
**PART C2 - ITS Architecture Flow Diagrams**

**Town of Gilbert IMC**

*The planned and future flows are not necessarily being funded. They may reflect the desire to have the data link from either or both sides of the stakeholders.*

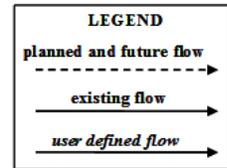


**ATIS01 - Broadcast Traveler Information  
Local Cities and Municipalities (2 of 2)**



*Many local PIOs are utilizing social media services to relay traveler information to the public. This availability of information from local agencies is being updated regularly and therefore is being shown as an existing information flow to assume all agencies will eventually provide this information to travelers through their own services or via other services.*

*The planned and future flows are not necessarily being funded. They may reflect the desire to have the data link from either or both sides of the stakeholders.*





<b>PART D1 - Detailed Cost Estimate</b>					
				\$0	Yes
				\$0	Yes
<b>SUBTOTAL - CONSTRUCTION</b>				\$409,500	\$409,500



<b>PART D1 - Detailed Cost Estimate</b>					
CONTRACTOR MOBILIZATION	LS	1	\$42,000.00	\$42,000.00	Yes
TRAFFIC CONTROL	LS	1	\$5,000.00	\$5,000.00	Yes
CONSTRUCTION SURVEY & LAYOUT	LS	1	\$500.00	\$500.00	Yes
CONSTRUCTION CONTINGENCIES	LS	1	\$25,000.00	\$25,000.00	Yes
CONSTRUCTION ADMINISTRATION	LS	1		\$0.00	Yes
<b>SUBTOTAL – MOBILIZATION &amp; ADMINISTRATION COSTS</b>				\$72,500.00	\$72,500
<b>TOTAL CONSTRUCTION OR IMPLEMENTATION COST</b>				\$482,000.00	\$482,000

<b>PART D1 - Detailed Cost Estimate</b>					
<b>D. ADOT Fee for PE Reviews and Staff Charges</b>	LS	1	\$15,000	\$15,000	No
<b>TOTAL ADOT Fee COST</b>				\$15,000	\$0
<b>E. TOTAL PROJECT COST</b>				\$607,000	\$482,000
<b>F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS</b>					
<b>TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION</b>					<b>\$607,000</b>
<b>TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT</b>					<b>\$482,000</b>
<b>TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)</b>					<b>\$454,526</b>
<b>LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)</b>					<b>\$27,474</b>
<b>LOCAL AGENCY FUNDS <u>NOT</u> ELIGIBLE FOR FEDERAL REIMBURSEMENT</b>					<b>\$125,000</b>

**PART D2 - TOTAL PROJECT BUDGET AND TIP PROGRAMMING**  
**(All Items are Required, Unless Identified as 'Optional')**

Please provide a cost and programming estimate for the total project (e.g. the cost to complete all planned segment improvements). The design for the project should be programmed at least 1 year, preferably 2 years, prior to construction.

**Section 1 - Total Project Budget**

Cost Estimate for the Project from Part D1	Eligible Federal Cost	Local Cost Only	Total Cost	(Optional) Additional Notes
A. SCOPING (15% Preliminary Engineering Design) (Non-infrastructure projects: Only #2 applies).	\$ -	\$ 40,000	\$ 40,000	
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E (Not applicable to non-infrastructure projects)	\$ -	\$ 70,000	\$ 70,000	
C. CONSTRUCTION OR IMPLEMENTATION				
1. CONSTRUCTION ELEMENTS	\$ 409,500	\$ -	\$ 409,500	
2. PROCUREMENT	\$ -	\$ -	\$ -	
3. OTHER ITEMS	\$ -	\$ -	\$ -	
4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only)	\$ 72,500	\$ -	\$ 72,500	
SUBTOTAL	\$ 482,000	\$ -	\$ 482,000	
D. ADOT Fee for PE Reviews and Staff Charges	\$ -	\$ -	\$ 15,000	
<b>Total Project Cost</b>	\$ 482,000	\$ 110,000	\$ 607,000	

**Agency Programming**

Please describe the programming of the project in the agency's own CIP/TIP.

Requested MAG TIP Programming	Short Work Description (E.g. Construct HAWK)	Year (Choose One)	Local Cost	CMAQ Cost	Total Cost	Local Share
1. Scoping and PE (Optional)	Develop PA and PE	2018	\$ 110,000	\$ -	\$ 110,000	100%
2. Other (Optional)	ADOT Fee		\$ 15,000	\$ -	\$ 15,000	100%
3. Other (Optional)				\$ -	\$ -	
4. Construction or Implementation	Procure and Integrate ARID devices	2019	\$ 27,474	\$ 454,526	\$ 482,000	6%
<b>Totals</b>			\$ 152,474	\$ 454,526	\$ 607,000	25%

<b>PART E - SIGNATURE AND CHECKLIST</b>	
As the jurisdiction's manager/administrator or designated representative, I certify that this application is accurate and complete and that the project will be included in the sponsoring MAG member agency's local CIP/TIP if the project is selected for federal funding.	
Signature:	
Name:	Ray Dovanina, P.E.
Title:	Street Transportation Director
Date:	September 16, 2015
<b>Checklist - OPTIONAL</b>	
This check list is optional, but is included to facilitate applicant review and verification that all required fields in the form have been completed.	
<b>PART A - Contacts</b>	<b>Complete?</b>
Contact Information, fields 1 – 5 are complete	Y
<b>PART B - TIP Listing and CMAQ Score Data</b>	<b>Complete?</b>
1. Traffic Estimate and Roadway Characteristics - Fields a - i are completed	X
2. Improvements in Traffic Management & Operations	X
3. Other Improvements - As applicable all fields are completed	X
4. Traffic Flow Improvement Due to Project	Y
<b>PART C1 - ITS Project Information</b>	<b>Complete?</b>
Section A is Complete	Y
Section B is Complete	Y
Section C is Complete & A PDF file of map will be attached to the submittal to MAG	Y
Section D is Complete & All relevant Architecture Flow Diagrams have been inserted in the worksheet	Y
Section E is Complete	Y
Section F is Complete	Y
Section G is Complete	Y
Section H is Complete	Y
<b>PART C2 - ITS Architecture Flow Diagrams have been inserted</b>	Y
<b>PART D1 - Detailed Cost Estimate</b>	Y
<b>PART D2 - TOTAL PROJECT BUDGET AND TIP PROGRAMMING</b>	Y
<b>PART E - Signature &amp; Checklist</b>	<b>Complete?</b>
Form is signed	Y
Name, title and date fields are completed.	Y

# City of Phoenix Proposed ARID Locations

