FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls

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Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Avondale AVN-01
Other Partnering Agencies	
ITS Project Title:	Traffic Operation Center & Strategic Implementation Plan

B. Project Goals & Objectives

Project Goals:

To provide the City of Avondale with a Design for the Traffic Operations Center and Strategic Plan for Implementing the City's ATMS Master Plan. The TOC will be a key component to the City's ATMS system and the Strategic Plan will help lay the foundation for additional implementation steps to take in the development of a coordinated system. The TOC and Plan will address traffic signal coordination, traveler information dissemination, incident and event traffic managment, and an important resource for determining future infrastructure. The TOC and Strategic Plan will be key for Avondale to improve traffic congestion, decrease air pollution, and improve safety.

Objectives:

To design a TOC and provide a plan that will be compatible and complementary to other plans and existing information technology systems used within the region and State of Arizona. The TOC will be an important facility for the City of Avondale to maintain its wireless traffic signal system, implement traffic signal coordination and manage traffic on a daily basis.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	Yes
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-CCTV, Signal Controler	Center Subsystem-TMC	traffic images
		signal control status
Center Subsystem-TMC	Roadside Subsystem-Signal Controler, CCTV	signal control data
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6, 1.7, 1.10	ATMS01, ATMS02, ATMS03, ATMS06, ATMS08, ATMS19
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	Yes	In the future	
5. Archived Data Management	No		
6. Incident Management	Yes	1.7, 5.3	ATMS08, EM02, EM08, EM09, EM10
7. Freeway-Arterial	Yes	1.6	

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.
(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.
(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$350,000.00	$150,000.00	$500,000.00
Cost percentage	70.0%	30.0%	

E. Project Schedule
The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2008
Receipt of ADOT project number	Jan-2009	Yes	2	Jan-2009
Initial DCR	Feb-2009	Yes	4	Feb-2009
Final DCR	Mar-2009	Yes	6	May-2009
30% Preliminary Plans, Cost Estimate and Report	May-2009	Yes	8	Jul-2009
60% Preliminary Plans, Cost Estimate and Report	Jul-2009	Yes	12	Nov-2009
Final Preliminary Plans, Cost Estimate and Report	Sep-2009	Yes	14	Jan-2010

Environmental Clearance	Jul-2009	No		NA
Utility Clearance	Aug-2009	Yes	10	Aug-2009
Right-of-Way Clearance	May-2009	No		NA
Approval of IGA	Nov-2009	Yes	14	Jan-2010
Obligation authority of Federal funds	Dec-2009	Yes	15	Jan-2010
Advertised Date	Feb-2010	Yes	18	Apr-2010
Final Deployment	Aug-2010	Yes	22	Sep-2010

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	1.25
Additional staff resources required for fully utilizing features added by project (FTEs)	1
Estimated current annual ITS operations & maintenance budget	$0
Estimated additional annual operations & maintenance funds required for features added by project	$50,000
Estimated DATE from when required additional O&M funds will be available	Jul-2009

Other comments:

The City has identified a new annual O&M account (next FY) and 1 additional FTE (out two FY's) in its budget forecasting.

G. 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 (See Appendix A of Arterial ITS Plan)

during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Town of Buckeye BCK-01
Other Partnering Agencies	N/A
ITS Project Title:	Buckeye Miller Road and Monroe Avenue ITS Project

B. Project Goals & Objectives

Project Goals:

Promote traffic progression and congestion mitigation by providing efficient traffic control via fiber network. Establish basic communication network for future ITS applications such as Advanced traffic management, incident management, etc.

Objectives:

Plan, design and construct fiber optical network along Miller Road and Monroe Avenue. Interconnect traffic signals to realize central control traffic signal system. Reduce delay in downtown Buckeye and

traffic signals to realize central control traffic signal system. Reduce delay in downtown Buckeye and onto I-10.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pae	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Center Subsystem-communication hub	Roadside Subsystem-Signal controler	signal control data
Roadside Subsystem-Signal controler	Center Subsystem-communication hub	signal control status

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6 traffic control	ATMS-07 Regional Traffic Control
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		

5. Archived Data Management	No		
6. Incident Management	No		
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

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(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$210,000.00	$90,000.00	$300,000.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Dec-2007
Receipt of ADOT project number	Feb-2008	Yes	2	Feb-2008

Initial DCR	Mar-2008	Yes	4	Mar-2008
Final DCR	Apr-2008	Yes	5	Apr-2008
30% Preliminary Plans, Cost Estimate and Report	Jun-2008	Yes	7	Jun-2008
60% Preliminary Plans, Cost Estimate and Report	Aug-2008	Yes	9	Aug-2008
Final Preliminary Plans, Cost Estimate and Report	Oct-2008	Yes	11	Nov-2008
Environmental Clearance	Aug-2008	Yes	9	Sep-2008
Utility Clearance	Sep-2008	Yes	10	Sep-2008
Right-of-Way Clearance	Jun-2008	Yes	10	Oct-2008
Approval of IGA	Dec-2008	Yes	14	Feb-2009
Obligation authority of Federal funds	Jan-2009	Yes	15	Feb-2009
Advertised Date	Mar-2009	Yes	18	May-2009
Final Deployment	Sep-2009	Yes	24	Nov-2009

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	1	
Additional staff resources required for fully utilizing features added by project (FTEs)	3	
Estimated current annual ITS operations & maintenance budget	$75,000	
Estimated additional annual operations & maintenance funds required for features added by project	$250,000	
Estimated DATE from when required additional O&M funds will be available	FY 2010	check project schedule

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Chandler CHN-01
Other Partnering Agencies	N/A
ITS Project Title:	Chandler Boulevard Fiber Interconnect

B. Project Goals & Objectives

Project Goals:

Reduce congestion and air pollution through improved traffic management.

Objectives:

Interconnect traffic signals along Chandler Boulevard from Delaware Street to Gillber Road and connect with TMC. Provide the capability for better signal coordination and other advanced ITS applications such as CCTV and so on. As part of the RCN, provide the medium for future center-to-center communications.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	No
Traveler Subsystem	No
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	YES

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem- Signal Controler	Center Subsystem-TMC	signal control status
Center Subsystem-TMC	Roadside Subsystem- Signal Controler	signal control data

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6 Traffic Control	ATMS07 Regional Traffic control
2. Transit Operations Support	No		

3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	No		
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

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(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$315,000.00	$135,000.00	$450,000.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Oct-2007
Receipt of ADOT project number	Dec-2007	Yes	2	Dec-2007
Initial DCR	Jan-2008	Yes	4	Jan-2008
Final DCR	Feb-2008	Yes	4	Jan-2008
30% Preliminary Plans, Cost Estimate and Report	Apr-2008	Yes	7	Apr-2008
60% Preliminary Plans, Cost Estimate and Report	Jun-2008	Yes	9	Jun-2008
Final Preliminary Plans, Cost Estimate and Report	Aug-2008	Yes	18	Apr-2009
Environmental Clearance	Jun-2008	Yes	9	Jul-2008
Utility Clearance	Jul-2008	Yes	10	Jul-2008
Right-of-Way Clearance	Apr-2008	Yes	10	Aug-2008
Approval of IGA	Oct-2008	Yes	14	Dec-2008
Obligation authority of Federal funds	Nov-2008	Yes	15	Dec-2008
Advertised Date	Jan-2009	Yes	18	Mar-2009
Final Deployment	Jul-2009	Yes	22	Aug-2009

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)

Additional staff resources required for fully utilizing features added by project (FTEs)	
Estimated current annual ITS operations & maintenance budget	
Estimated additional annual operations & maintenance funds required for features added by project	
Estimated DATE from when required additional O&M funds will be available	

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Glendale GLN-01
Other Partnering Agencies	
ITS Project Title:	CCTV Camera Installation

B. Project Goals & Objectives

Project Goals:

This project includes purchase and installation of 12 pan, tilt, zoom closed circuit television (CCTV) cameras on existing traffic signal poles at key arterial-arterial intersections in the northern and central part of Glendale. The goal of the project is to better utilize the roadway system by employing effective management techniques and to manage traffic flows affected by incidents, special events, and other unplanned traffic events. Installation of this monitoring equipment will allow the City of Glendale to accomplish these goals by filling in the gaps in the management system where the city currently has installed fiber optic cable to control traffic signals, but does not have a means to monitor real-time traffic conditions.

Objectives:

The objective of this project is to expand the traffic monitoring capabilities of the City of Glendale to enable traffic engineers and police officers to actively monitor event and commuter traffic for improved traffic management and traveler information. In some areas, the City of Glendale serves as a pass through point to access major transportation corridors such as Loop 101 and I-17. The City has also grown into a regional destination with the opening of the Cardinals Stadium, which will host the Fiesta, BCS, and Super Bowls. These cameras would become regional assets as they are incorporated into the AZTech network, expanding the arterial street and destination point coverage following the Glendale connection to ADOT expected in mid 2007.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pae	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem - CCTV Video Images	Center Subsystem - TMC	Traffic Images
Center Subsystem - TMC	Roadside Subsystem - CCTV	Camera Control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
City of Glendale	AZTech Partners	Traffic Signal Data & CCTV Video Images	Fiber/RCN	No	Sep-2007	

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6	ATMS01, 03, 07, 21
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6, 7.1	ATMS01, 03, 07, 21
4. Integrated Traveler Information	No		
5. Archived Data Management	Yes	7.1	ATMS01, 03, 07, 21
6. Incident Management	Yes	1.7	ATMS08, 21
7. Freeway-Arterial	No		

D. Project Budget

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(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	**Local Match (min 30%)**	**Total Cost**
Amount	$224,592.00	$96,254.00	$320,846.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Jan-2007
Receipt of ADOT project number	Mar-2007	Yes	1	Jan-2007
Initial DCR	Apr-2007	No	0	NA
Final DCR	May-2007	Yes	3	Apr-2007
30% Preliminary Plans, Cost Estimate and Report	Jul-2007	No	0	NA
60% Preliminary Plans, Cost Estimate and Report	Sep-2007	No	0	NA
Final Preliminary Plans, Cost Estimate and Report	Nov-2007	Yes	5	Jun-2007
Environmental Clearance	Sep-2007	Yes	6	Jul-2007
Utility Clearance	Oct-2007	Yes	6	Jul-2007
Right-of-Way Clearance	Jul-2007	Yes	6	Jul-2007
Approval of IGA	Jan-2008	Yes	6	Jul-2007
Obligation authority of Federal funds	Feb-2008	Yes	7	Aug-2007
Advertised Date	Apr-2008	Yes	8	Sep-2007
Final Deployment	Oct-2008	Yes	24	Dec-2008

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	4 (2 additional are funded)
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$630,246
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Glendale GLN-02
Other Partnering Agencies	
ITS Project Title:	ITS Deployment - Various Locations

B. Project Goals & Objectives

Project Goals:

This goal of this project is to greatly improve the City's ability to manage commuter traffic traveling through the city to and from work by having a view of traffic conditions and control of traffic signals on adjacent arterials. Specifically, four miles of fiber optic cable and conduit will be installed to communicate with ten currently non-interconnected signalized intersections on Cactus Road, Thunderbird Road, and Greenway Road between 55th Avenue and 67th Avenue. Additionally, three closed circuit television (CCTV) cameras will be installed at arterial-arterial intersections to allow for remote monitoring of traffic flows.

Objectives:

Currently Thunderbird Road serves as a key east-west corridor for communities in the west valley and has the second highest traffic demand behind Bell Road, while Greenway Road acts as a reliever for the Bell Road corridor. Peak traffic flows extend well beyond the peak hour, with especially heavy demands at the intersections of 59th and 67th avenues with Thunderbird and Cactus roads. The objective of this project is to relieve the peak travel periods through quicker staff response times and improved traffic management and traveler information capabilities.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pae	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem - Signal Controller, CCTV	Center Subsystem - TMC	Traffic Signal Status, Traffic Images
Center Subsystem - TMC	Roadside Subsystem - Traffic Signal Controllers & CCTV	Traffic Signal Data, Camera Control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
City of Glendale	AZTech Partners	Traffic Signal Data & CCTV Video Images	Fiber/RCN	No	Sep-2007	

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6	ATMS01, 03, 07, 21
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6, 7.1	ATMS01, 03, 07, 21
4. Integrated Traveler Information	No		
5. Archived Data Management	Yes	7.1	ATMS01, 03, 07, 21
6. Incident Management	Yes	1.7	ATMS08, 21
7. Freeway-Arterial	No		

D. Project Budget

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(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	**Local Match (min 30%)**	**Total Cost**
Amount	$774,593.00	$331,969.00	$1,106,562.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				May-2011
Receipt of ADOT project number	Jul-2011	Yes	2	Jul-2011
Initial DCR	Aug-2011	Yes	4	Aug-2011
Final DCR	Sep-2011	Yes	5	Sep-2011
30% Preliminary Plans, Cost Estimate and Report	Nov-2011	Yes	7	Nov-2011
60% Preliminary Plans, Cost Estimate and Report	Jan-2012	Yes	9	Jan-2012
Final Preliminary Plans, Cost Estimate and Report	Mar-2012	Yes	11	Apr-2012
Environmental Clearance	Jan-2012	Yes	9	Feb-2012
Utility Clearance	Feb-2012	Yes	10	Feb-2012
Right-of-Way Clearance	Nov-2011	Yes	10	Mar-2012
Approval of IGA	May-2012	Yes	14	Jul-2012
Obligation authority of Federal funds	Jun-2012	Yes	15	Jul-2012
Advertised Date	Aug-2012	Yes	18	Oct-2012
Final Deployment	Feb-2013	Yes	24	Apr-2013

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	4 (2 additional are funded)
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$630,246
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Goodyear GDY-01
Other Partnering Agencies	AzTech Partners
ITS Project Title:	McDowell Rd (Litchfield Rd to Sarival Rd) Fiber Installation

B. Project Goals & Objectives

Project Goals:

Implement the ability to efficiently manage traffic under normal, congested and incident conditions.

Objectives:

Expand TMC traffic video surveillance and data mornitoring capability by installing an extension to existing fiber optic interconnect infrastrcture, in a rapid growth area consisting of a new 6-lane arterial roadway, and containing a new regional mall, capable of expanding coordination and signal timing adjustments.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem, Signal	Center	Signal Status, Data

Controller	Subsystem-TMC	Uploads
Center Subsystem-TMC	Roadside Subsystem-Signal Controller	Data Downloads
Roadside Subsystem, CCTV	Center Subsystem-TMC	Live Video
Center Subsystem - TMC	Center Subsystem - Regional	Intersystem Data/Video Exchanges

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Goodyear	AzTech Partners	Signal Database, Video Images	Fiber & RCN	No	Jul-2012	

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	Yes	1.6	ATMS01, 03, 07
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.3, 1.6	ATMS 01, 03, 07
4. Integrated Traveler Information	No		
5. Archived Data Management	Yes	7.1	ATMS07, 21
6. Incident Management	Yes	1.7	ATMS07, 08
7. Freeway-Arterial Operations	Yes	1.6, 1.7, 4.5, 5.3	ATMS01, 03, 04, 06, 07, 08, 21

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$591,045.00	$253,305.00	$844,350.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2010
Receipt of ADOT project number	Jan-2011	Yes	2	Jan-2011
Initial DCR	Feb-2011	Yes	4	Feb-2011
Final DCR	Mar-2011	Yes	5	Mar-2011
30% Preliminary Plans, Cost Estimate and Report	May-2011	Yes	7	May-2011
60% Preliminary Plans, Cost Estimate and Report	Jul-2011	Yes	9	Jul-2011
Final Preliminary Plans, Cost Estimate and Report	Sep-2011	Yes	11	Oct-2011
Environmental Clearance	Jul-2011	Yes	9	Aug-2011
Utility Clearance	Aug-2011	Yes	10	Aug-2011

Right-of-Way Clearance	May-2011	Yes	10	Sep-2011
Approval of IGA	Nov-2011	Yes	14	Jan-2012
Obligation authority of Federal funds	Dec-2011	Yes	15	Jan-2012
Advertised Date	Feb-2012	Yes	18	Apr-2012
Final Deployment	Aug-2012	Yes	24	Oct-2012

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	1.5
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$200,000
Estimated additional annual operations & maintenance funds required for features added by project	$20,000
Estimated DATE from when required additional O&M funds will be available	Nov-2011

Other comments:

This project connects to and extends a critical fiber infrastructure that is being constructed in FY2007 with other MAG funds, including a new TMC. Goodyear must attain successful traffic management for the new regional mall, events at PIR, and incident diversions onto McDowell Road from I-10, located 1/2 mile south of, and parallel to McDowell Road. There are 15 new signals, all being provided with CCTV ready to be connected to this proposed fiber, along McDowell Road in the next two to three years alone, not to mention additional signals we do not yet envision. This is an important regional traffic management issue affecting our neighboring cities and I-10 directly.

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls

Submit this Excel workbook to MAG via email to: LLUO@MAG.MARICOPA.GOV

Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Maricopa Association of Governments MAG-01
Other Partnering Agencies	MAG member agencies
ITS Project Title:	Traffic Signal Optimization Project

B. Project Goals & Objectives

Project Goals:

Provides assistance to member agencies that own and operate local traffic signal systems, in maintaining these systems adjusted to match the prevailing traffic patterns and to reduce congestion and vehicular emissions.

Objectives:

Improve traffic signal coordination, optimization and review operations through simulation modeling.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow

Field Subsystem-Signal controler	Center-TMC/Control Center	Traffic Signal Status
Center-TMC/Control Center	Field Subsystem-Signal controler	Traffic Signal Control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	Yes	1.6 Traffic Control	ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	No		
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$300,000.00	MAG UPWP	$300,000.00
Cost percentage	100.0%	#VALUE!	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2008
Receipt of ADOT project number	Jan-2009	No		NA
Initial DCR	Feb-2009	No		NA
Final DCR	Mar-2009	No		NA
30% Preliminary Plans, Cost Estimate and Report	May-2009	No		NA
60% Preliminary Plans, Cost Estimate and Report	Jul-2009	No		NA
Final Preliminary Plans, Cost Estimate and Report	Sep-2009	No		NA
Environmental Clearance	Jul-2009	No		NA
Utility Clearance	Aug-2009	No		NA
Right-of-Way Clearance	May-2009	No		NA

Approval of IGA	Nov-2009	No		NA
Obligation authority of Federal funds	Dec-2009	No		NA
Advertised Date	Feb-2010	No		NA
Final Deployment	Aug-2010	Yes	6	May-2009

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	N/A
Additional staff resources required for fully utilizing features added by project (FTEs)	N/A
Estimated current annual ITS operations & maintenance budget	N/A
Estimated additional annual operations & maintenance funds required for features added by project	N/A
Estimated DATE from when required additional O&M funds will be available	N/A check project schedule

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

N/A

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	***Maricopa Association of Governments*** MAG-02
Other Partnering Agencies	MAG member agencies
ITS Project Title:	Traffic Signal Optimization Project

B. Project Goals & Objectives

Project Goals:

Provides assistance to member agencies that own and operate local traffic signal systems, in maintaining these systems adjusted to match the prevailing traffic patterns and to reduce congestion and vehicular emissions.

Objectives:

Improve traffic signal coordination, optimization and review operations through simulation modeling.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Field Subsystem-Signal controler	Center-TMC/Control Center	Traffic Signal Status
Center-TMC/Control Center	Field Subsystem-Signal controler	Traffic Signal Control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6 Traffic Control	ATMS03
2. Transit Operations Support	No		

3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	No		
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$500,000.00	MAG UPWP	$500,000.00
Cost percentage	100.0%	#VALUE!	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2009
Receipt of ADOT project number	Jan-2010	No		NA
Initial DCR	Feb-2010	No		NA
Final DCR	Mar-2010	No		NA
30% Preliminary Plans, Cost Estimate and Report	May-2010	No		NA
60% Preliminary Plans, Cost Estimate and Report	Jul-2010	No		NA
Final Preliminary Plans, Cost Estimate and Report	Sep-2010	No		NA
Environmental Clearance	Jul-2010	No		NA
Utility Clearance	Aug-2010	No		NA
Right-of-Way Clearance	May-2010	No		NA
Approval of IGA	Nov-2010	No		NA
Obligation authority of Federal funds	Dec-2010	No		NA
Advertised Date	Feb-2011	No		NA
Final Deployment	Aug-2011	Yes	6	May-2010

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs) N/A

Additional staff resources required for fully utilizing features added by project (FTEs)	N/A
Estimated current annual ITS operations & maintenance budget	N/A
Estimated additional annual operations & maintenance funds required for features added by project	N/A
Estimated DATE from when required additional O&M funds will be available	N/A check project schedule

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

N/A

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	**Maricopa Association of Governments** MAG-03
Other Partnering Agencies	MAG member agencies
ITS Project Title:	Traffic Signal Optimization Project

B. Project Goals & Objectives

Project Goals:

Provides assistance to member agencies that own and operate local traffic signal systems, in maintaining these systems adjusted to match the prevailing traffic patterns and to reduce congestion and vehicular emissions.

Objectives:

Improve traffic signal coordination, optimization and review operations through simulation modeling.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Field Subsystem-Signal controler	Center-TMC/Control Center	Traffic Signal Status
Center-TMC/Control Center	Field Subsystem-Signal controler	Traffic Signal Control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6 Traffic Control	ATMS03
2. Transit Operations Support	No		

3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	No		
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$500,000.00	MAG UPWP	$500,000.00
Cost percentage	100.0%	#VALUE!	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2011
Receipt of ADOT project number	Jan-2012	No		NA
Initial DCR	Feb-2012	No		NA
Final DCR	Mar-2012	No		NA
30% Preliminary Plans, Cost Estimate and Report	May-2012	No		NA
60% Preliminary Plans, Cost Estimate and Report	Jul-2012	No		NA
Final Preliminary Plans, Cost Estimate and Report	Sep-2012	No		NA
Environmental Clearance	Jul-2012	No		NA
Utility Clearance	Aug-2012	No		NA
Right-of-Way Clearance	May-2012	No		NA
Approval of IGA	Nov-2012	No		NA
Obligation authority of Federal funds	Dec-2012	No		NA
Advertised Date	Feb-2013	No		NA
Final Deployment	Aug-2013	Yes	6	May-2012

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	N/A

Additional staff resources required for fully utilizing features added by project (FTEs)	N/A
Estimated current annual ITS operations & maintenance budget	N/A
Estimated additional annual operations & maintenance funds required for features added by project	N/A
Estimated DATE from when required additional O&M funds will be available	N/A check project schedule

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

N/A

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Maricopa County Department of Transportation MMA-01
Other Partnering Agencies	N/A
ITS Project Title:	FY 2008 ITS Improvements: R.H. Johnson Boulevard Fiber Infrastructure Completion

B. Project Goals & Objectives

Project Goals:

- Build the fiber infrastructure that will support operation and interconnectivity of existing and future MCDOT ITS devices;
- Improve signal coordination, and enable traffic management and real-time traffic monitoring at the MCDOT TMC via CCTV, in order to improve traffic flow, safety, and incident management on major roadways in the Sun City West community;
- Contribute to an integrated regional ITS infrastructure by connecting to the infrastructure of other agencies;
- Enhance freeway-arterial coordinated operations by future indirect connection to the ADOT FMS system on SR-101;
- Provide sources of traffic data that will ultimately be transferable to other jurisdictions by center-to-center communications via the planned Regional Community Network (RCN).

Objectives:

- Complete the fiber infrastructure on R.H. Johnson Boulevard (151st Avenue to Bell Road) and Meeker Boulevard (Granite Valley Drive to R.H. Johnson Boulevard) where only backbone conduit currently exists, including the construction of new pull boxes and branch conduits, and the installation of new backbone and branch fiber optic cables;
- Interconnect 16 existing traffic signals and 3 existing CCTV cameras to the MCDOT traffic management system;
- Provide connectivity for 4 future CCTV cameras (MCDOT funded);
- Connect to the existing, multi-jurisdictional Bell Road ITS project, which will enable indirect connection to the ADOT FMS system at the SR-101/Bell Road interchange.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	No
Traveler Subsystem	No
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem - Signal Controllers, CCTV	Center Subsystem - TMS	signal control status
		traffic images
Center Subsystem - TMS	Roadside Subsystem- Signal Controllers, CCTV	signal control data
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
MCDOT	ADOT	arterial traffic information	Fiber	Yes		

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6, 1.7	ATMS01, ATMS03, ATMS08
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6	ATMS07
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	Yes	1.7	ATMS08
7. Freeway-Arterial	Yes	1.6	ATMS07

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.
(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.
(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$355,600.00	$152,400.00	$508,000.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Jul-2007
Receipt of ADOT project number	Sep-2007	Yes	2	Sep-2007
Initial DCR	Oct-2007	Yes	0	Jul-2007
Final DCR	Nov-2007	Yes	2	Sep-2007
30% Preliminary Plans, Cost Estimate and Report	Jan-2008	Yes	0	Jul-2007
60% Preliminary Plans, Cost Estimate and Report	Mar-2008	Yes	0	Jul-2007
Final Preliminary Plans, Cost Estimate and Report	May-2008	Yes	3	Oct-2007
Environmental Clearance	Mar-2008	Yes	10	May-2008
Utility Clearance	Apr-2008	Yes	1	Aug-2007
Right-of-Way Clearance	Jan-2008	Yes	1	Aug-2007
Approval of IGA	Jul-2008	No	0	NA
Obligation authority of Federal funds	Aug-2008	Yes	7	Feb-2008
Advertised Date	Sep-2008	Yes	9	Apr-2008
Final Deployment	Apr-2009	Yes	24	Jul-2009

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	7
Additional staff resources required for fully utilizing features added by project (FTEs)	0.25
Estimated current annual ITS operations & maintenance budget	$1,200,000
Estimated additional annual operations & maintenance funds required for features added by project	$15,240
Estimated DATE from when required additional O&M funds will be available	Jul-2009

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

Maricopa County DOT will incorporate a Systems Engineering Analysis in the scope of work for the project. The Systems Engineering Analysis will include but not be limited to the following:

1. Interface with the Regional ITS Architecture – Develop clear statement about project goals and objectives, and description of relevant subsystems, user services, and information transfer that satisfy the Regional ITS Architecture requirement.
2. Project Plan – Develop a plan that includes project tasks and interdependencies, budget, schedule, and timeframe, including key milestones.
3. Concept of Operations – Define a clear vision of how the project will meet the needs of stakeholders and how the system will operate under various scenarios. The Concept of Operations will describe how the new connections of this project will necessitate building upon existing operations and procedures at the MCDOT TMC.
4. System Requirements – Develop requirements, including user requirements and functional requirements. These will guide system expansion, and will be developed in conjunction with the Concept of Operations. This section will be building on established programs but will define new requirements for new devices. Goals and objectives will also be established.
5. Requirements Review – Plan for design reviews to ensure the design meets the proposed requirements and agency needs and expectations.
6. System Implementation – Review planned procurement process, software coding, database implementation, and configuration of necessary components of system, including interfaces with other jurisdictions.
7. System Verification – Develop procedures to test interfaces and data transfers to ensure the system is functioning as planned.
8. System Operation and Maintenance – Develop an Operations and Maintenance Plan to include maintenance resources, responsibilities, and system operations and maintenance procedures.
9. System Update – Develop a plan for future ITS deployments and software upgrades, including anticipated timeframe.

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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Links to various websites are provided for additional information and help
The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas
The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Maricopa County Department of Transportation MMA-02
Other Partnering Agencies	Arizona Department of Transportation, Cities of Scottsdale, Surprise, and Tempe
ITS Project Title:	Arterial ATIS Expansion

B. Project Goals & Objectives

Project Goals:

- Enhance regional arterial traveler information and support regional traffic management;
- Facilitate sharing of planned construction and event data between participating agencies;
- Minimize double entry of planned event data by local jurisdictions.

Objectives:

- Implement new processes and capabilities to automate the exchange of information between local jurisdictions and the RADS to collect local permitting information for key arterials throughout the Valley and to ehnahce the arterial information available to travelers through 511 web and phone;
- Build on the successful model of arterial incident data exchange between Phoenix Fire CAD and RADS to include planned closure/restriction information from local jurisdictions;
- Establish web processing capabilities and interfaces to link planned construction and event data from permitting systems in Surprise, Scottsdale, Tempe with RADS and HCRS;
- Upgrade software and modify 511 web and phone to support more comprehensive arterial traveler information.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pae	Yes or No
Center Subsystem	Yes
Traveler Subsystem	Yes
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow

Traffic Management (TMS) [Local Agency TMCs]*	Archived Data Management Subsystem (ADMS) [RADS Server]	traffic archive data
Archived Data Management Subsystem (ADMS) [RADS Server]*	Traffic Management (TMS) [Local Agency TMCs]	archive requests
		archive status
Maintenance and Construction Management (MCMS) [Local Agency TMCs]*	Archived Data Management Subsystem (ADMS) [RADS Server]	maintenance and construction archive data
Archived Data Management Subsystem (ADMS) [RADS Server]*	Maintenance and Construction Management (MCMS) [Local Agency TMCs]	archive requests
		archive status
Traffic Management (TMS) [RADS Server]*	Information Service Provider (ISP) [HCRS Server]	road network conditions
Personal Information Access (PIAS)	Information Service Provider (ISP) [HCRS Server]	traveler information, emergency traveler information

*** This specific project is addressing enhanced information sharing among center subsystems. Therefore, all subsystem flows in this table are between subsystems within the center subsystem.**

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Local City Agencies (TMCs)	RADS Server	traffic information, maintenance and construction information, archive requests, archive status	Fiber/Internet	Yes		
RADS Server	HCRS Server	road network conditions, traffic information, maintenance and construction information	Fiber/Internet	Yes		
HCRS Server	511 web and phone	traveler information	Ethernet	Yes		

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.1, 1.2, 1.6, 1.7	ATMS07, ATMS08
2. Transit Operations Support	Yes	2.1	AD2

3. Interagency Data Sharing and Control	Yes	1.7, 7.1	AD2
4. Integrated Traveler Information	Yes	1.1, 1.2	ATMS06
5. Archived Data Management	Yes	7.1	AD1, AD2
6. Incident Management	Yes	1.7	ATMS07, ATMS08
7. Freeway-Arterial	Yes	1.6, 8.1	AD1, AD2

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$385,000.00	$165,000.00	$550,000.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Jul-2007
Receipt of ADOT project number	Jan-2008	Yes	2	Sep-2007
Initial DCR	Feb-2008	Yes	2	Sep-2007
Final DCR	Mar-2008	Yes	4	Nov-2007
30% Preliminary Plans, Cost Estimate and Report	May-2008	No	0	NA
60% Preliminary Plans, Cost Estimate and Report	Jul-2008	No	0	NA
Final Preliminary Plans, Cost Estimate and Report	Sep-2008	Yes	5	Dec-2007
Environmental Clearance	Jul-2008	No	0	NA
Utility Clearance	Aug-2008	No	0	NA
Right-of-Way Clearance	May-2008	No	0	NA
Approval of IGA	Nov-2008	Yes	5	Dec-2007
Obligation authority of Federal funds	Dec-2008	Yes	5	Dec-2007
Advertised Date	Feb-2009	Yes	6	Jan-2008
Final Deployment	Aug-2009	Yes	18	Jan-2009

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	7
Additional staff resources required for fully utilizing features added by project (FTEs)	0.25
Estimated current annual ITS operations & maintenance budget	$1,200,000
Estimated additional annual operations & maintenance funds required for features added by project	$10,000
Estimated DATE from when required additional O&M funds will be available	Jan-2009

Other comments:

Information provided is for MCDOT only. Additional annual operations & maintenance funds shall be agreed upon by partner agencies.

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

Maricopa County DOT will incorporate a Systems Engineering Analysis in the scope of work for the project. The Systems Engineering Analysis will include but not be limited to the following:

1. Interface with the Regional ITS Architecture – Develop clear statement about project goals and objectives, and description of relevant subsystems, user services, and information transfer that satisfy the Regional ITS Architecture requirement.
2. Project Plan – Develop a plan that includes the responsibility of the partner stakeholders and contractors, project tasks and interdependencies, schedule and timeframe, including key milestones, and project budget.
3. Concept of Operations – Define a clear vision of how the project will meet the needs of stakeholders and how the system will operate under various scenarios. The Concept of Operations will be among the initial tasks, and will be developed in conjunction with the public partners and contractors.
4. System Requirements – Develop requirements, including user requirements and functional requirements. These will guide system design and implementation, and will be developed with stakeholders, in conjunction with the Concept of Operations. Goals and objectives will also be established.
5. Requirements Review – Develop plan for design reviews to ensure the design meets the proposed requirements and stakeholder needs and expectations.
6. System Design – Develop high-level design focusing on project architecture mapping and detailed design to address how the local jurisdiction systems will interface with RADS, and how the arterial information will be transferred to HCRS and ultimately 511, az511.com, and other ATIS tools. Plans need to be developed to verify the system and subsystem operate in accordance with the requirements.
7. System Implementation – Review planned procurement process, software coding, database implementation, and configuration of necessary components of system, including interfaces with local jurisdictions.
8. System Verification - Develop procedures to test interfaces and data transfers to ensure the system is functioning as planned.
9. System Operation and Maintenance – Develop an Operations and Maintenance Plan to include maintenance resources, responsibilities, and system operations and maintenance procedures.
10. System Update – Develop a plan for future updates, enhancements, and expansion of the arterial ATIS RADS program, including responsible entities and anticipated timeframe.

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls

Submit this Excel workbook to MAG via email to: LLUO@MAG.MARICOPA.GOV

Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Maricopa County Department of Transportation MMA-03
Other Partnering Agencies	N/A
ITS Project Title:	FY 2010 ITS Improvements: 99th Avenue Fiber Infrastructure

B. Project Goals & Objectives

Project Goals:

- Build the fiber infrastructure that will support operation and interconnectivity of existing and future MCDOT ITS devices;
- Improve signal coordination, and enable traffic management and real-time traffic monitoring at the MCDOT TMC via CCTV, in order to improve traffic flow, safety, and incident management, and to reduce vehicle emissions on the 99th Avenue corridor through Sun City, which is a key north-south alternate route for SR-101;
- Improve special event traffic management related to Cardinals Stadium and the Glendale Arena;
- Contribute to an integrated regional ITS infrastructure by providing redundant communications capabilities for other agencies;
- Enhance freeway-arterial coordinated operations by future indirect connection to the ADOT FMS system on SR-101;
- Provide sources of traffic data that will ultimately be transferable to other jurisdictions by center-to-center communications via the planned Regional Community Network (RCN).

Objectives:

- Construct new conduit and install new fiber optic cable along 99th Avenue between Olive Avenue and Bell Road;
- Install wireless connections to the MCDOT traffic management system and to additional traffic signals not directly along the conduit route;
- Interconnect 28 existing traffic signals, 4 existing CCTV cameras, and several mid-block detectors to the MCDOT traffic management system;
- Provide connectivity for 6 future CCTV cameras and 2 future arterial DMS (MCDOT funded);
- Connect to the existing, multi-jurisdictional Bell Road ITS project, and provide for connection to the future infrastructure on Olive Avenue, which will enable indirect connection to the ADOT FMS system at the SR-101 interchanges at Bell Road and/or Olive Avenue.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pae	Yes or No
Center Subsystem	No
Traveler Subsystem	No
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem - Signal Controllers, CCTV, DMS, Detectors	Center Subsystem - TMS	roadway information system status
		signal control status
		traffic flow
		traffic images
Center Subsystem - TMS	Roadside Subsystem - Signal Controllers, CCTV, DMS	roadway information system data
		signal control data
		traffic sensor control
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
MCDOT	ADOT	arterial traffic information	Fiber	Yes		
MCDOT	Surprise, Peoria, Glendale	arterial traffic information	Fiber	No	When RCN Phase 1 is built	

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.2, 1.3, 1.6, 1.7	ATMS01, ATMS03, ATMS06, ATMS08
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6	ATMS07
4. Integrated Traveler Information	Yes	1.2, 1.3	ATMS06, EM06, EM10
5. Archived Data Management	No		
6. Incident Management	Yes	1.7	ATMS08

7. Freeway-Arterial	Yes	1.6	ATMS07

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$805,000.00	$345,000.00	$1,150,000.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Jul-2009
Receipt of ADOT project number	Sep-2009	Yes	2	Sep-2009
Initial DCR	Oct-2009	Yes	0	Jul-2009
Final DCR	Nov-2009	Yes	2	Sep-2009
30% Preliminary Plans, Cost Estimate and Report	Jan-2010	Yes	0	Jul-2009
60% Preliminary Plans, Cost Estimate and Report	Mar-2010	Yes	0	Jul-2009
Final Preliminary Plans, Cost Estimate and Report	May-2010	Yes	5	Dec-2009
Environmental Clearance	Mar-2010	Yes	10	May-2010
Utility Clearance	Apr-2010	Yes	1	Aug-2009
Right-of-Way Clearance	Jan-2010	Yes	1	Aug-2009
Approval of IGA	Jul-2010	No	0	NA
Obligation authority of Federal funds	Aug-2010	Yes	10	May-2010
Advertised Date	Sep-2010	Yes	12	Jul-2010
Final Deployment	Apr-2011	Yes	27	Oct-2011

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	7
Additional staff resources required for fully utilizing features added by project (FTEs)	0.25
Estimated current annual ITS operations & maintenance budget	$1,200,000
Estimated additional annual operations & maintenance funds required for features added by project	$34,500
Estimated DATE from when required additional O&M funds will be available	Oct-2011

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

Maricopa County DOT will incorporate a Systems Engineering Analysis in the scope of work for the project. The Systems Engineering Analysis will include but not be limited to the following:

1. Interface with the Regional ITS Architecture – Develop clear statement about project goals and objectives, and description of relevant subsystems, user services, and information transfer that satisfy the Regional ITS Architecture requirement.
2. Project Plan – Develop a plan that includes project tasks and interdependencies, budget, schedule, and timeframe, including key milestones.
3. Concept of Operations – Define a clear vision of how the project will meet the needs of stakeholders and how the system will operate under various scenarios. The Concept of Operations will describe how the new connections of this project will necessitate building upon existing operations and procedures at the MCDOT TMC.
4. System Requirements – Develop requirements, including user requirements and functional requirements. These will guide system expansion, and will be developed in conjunction with the Concept of Operations. This section will be building on established programs but will define new requirements for new devices. Goals and objectives will also be established.
5. Requirements Review – Plan for design reviews to ensure the design meets the proposed requirements and agency needs and expectations.
6. System Implementation – Review planned procurement process, software coding, database implementation, and configuration of necessary components of system, including interfaces with other jurisdictions.
7. System Verification – Develop procedures to test interfaces and data transfers to ensure the system is functioning as planned.
8. System Operation and Maintenance – Develop an Operations and Maintenance Plan to include maintenance resources, responsibilities, and system operations and maintenance procedures.
9. System Update – Develop a plan for future ITS deployments and software upgrades, including anticipated timeframe.

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls
Submit this Excel workbook to MAG via email to: LLUO@MAG.MARICOPA.GOV
Please use one worksheet per project, with the tab at the bottom indicating agency priority
Links to various websites are provided for additional information and help
The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas
The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Maricopa County Department of Transportation MMA-04
Other Partnering Agencies	Valleywide
ITS Project Title:	RADS Upgrade

B. Project Goals & Objectives

Project Goals:

- Provide a substiantial regional archive of ITS and multimodal data to support arterial operations, system performance monitoring, and future planning.

Objectives:

- Enhance RADS equipment and software to allow for additional interfaces to cities in the metro area to share real-time arterial data (incident, detection, signal operations and signal timing plans) with the AZTech partners on the RADS network.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pae	Yes or No
Center Subsystem	Yes
Traveler Subsystem	Yes
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow

Transit Management Subsystem (TRMS) [Transit Agencies]*	Archived Data Management Subsystem (ADMS) [RADS Server]	transit archive data
Archived Data Management Subsystem (ADMS) [RADS Server]*	Transit Management Subsystem (TRMS) [Transit Agencies]	archive requests
		archive status
Traffic Management (TMS) [Various Local Agencies]*	Archived Data Management Subsystem (ADMS) [RADS Server]	traffic archive data
Archived Data Management Subsystem (ADMS) [RADS Server]*	Traffic Management (TMS) [Various Local Agencies]	archive requests
		archive status
Field Subsystem - Roadway Subsystem (RS) [DMS, Signals]	Center Subsystem - Archived Data Management Subsystem (ADMS) [RADS Server]	roadside archive data
Personal Information Access (PIAS)	Information Service Provider (ISP) [HCRS Server]	traveler information, emergency traveler information

*** This specific project is addressing enhanced information sharing among center subsystems. Therefore, all but the last of the subsystem flows in this table are between subsystems within the center subsystem.**

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Transit Agencies	AZTech RADS	transit archive data	Fiber and/or Internet	Yes		
Various Local Agencies' TMCs	AZTech RADS	traffic archive data, DMS operational data, signal timing	Fiber and/or Internet	Partial	When RCN Phases 1 & 2 are built	

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.1, 1.2, 1.6, 1.7	APTS7, ATMS07, ATMS08
2. Transit Operations Support	Yes	2.1	AD2, APTS7
3. Interagency Data Sharing and Control	Yes	1.6, 1.7, 7.1	AD2, APTS7, ATMS07

4. Integrated Traveler Information	Yes	1.1, 1.2	ATMS06
5. Archived Data Management	Yes	7.1	AD1, AD2
6. Incident Management	Yes	1.7	ATMS07, ATMS08
7. Freeway-Arterial	Yes	1.6, 8.1	AD1, AD2

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$68,250.00	$29,250.00	$97,500.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Jul-2011
Receipt of ADOT project number	Sep-2011	Yes	2	Sep-2011
Initial DCR	Oct-2011	Yes	2	Sep-2011
Final DCR	Nov-2011	Yes	4	Nov-2011
30% Preliminary Plans, Cost Estimate and Report	Jan-2012	No	0	NA
60% Preliminary Plans, Cost Estimate and Report	Mar-2012	No	0	NA
Final Preliminary Plans, Cost Estimate and Report	May-2012	Yes	16	Nov-2012
Environmental Clearance	Mar-2012	No	0	NA
Utility Clearance	Apr-2012	No	0	NA
Right-of-Way Clearance	Jan-2012	No	0	NA
Approval of IGA	Jul-2012	Yes	16	Nov-2012
Obligation authority of Federal funds	Aug-2012	Yes	5	Dec-2011
Advertised Date	Oct-2012	Yes	6	Jan-2012
Final Deployment	Apr-2013	Yes	14	Sep-2012

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	7
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$1,200,000
Estimated additional annual operations & maintenance funds required for features added by project	$5,000
Estimated DATE from when required additional O&M funds will be available	Sep-2012

Other comments:

Information provided is for MCDOT only. Additional annual operations & maintenance funds shall be agreed upon by partner agencies.

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

Maricopa County DOT will incorporate a Systems Engineering Analysis in the scope of work for the project. The Systems Engineering Analysis will include but not be limited to the following:

1. Interface with the Regional ITS Architecture – Develop clear statement about project goals and objectives, and description of relevant subsystems, user services, and information transfer that satisfy the Regional ITS Architecture requirement.
2. Project Plan – Develop a plan that includes the responsibility of the partner stakeholders and contractors, project tasks and interdependencies, schedule and timeframe, including key milestones, and project budget.
3. Concept of Operations – Define a clear vision of how the project will meet the needs of stakeholders and how the system will operate under various scenarios. The Concept of Operations will be among the initial tasks, and will be developed in conjunction with the public partners and contractors.
4. System Requirements – Develop requirements, including user requirements and functional requirements. These will guide system design and implementation, and will be developed with stakeholders, in conjunction with the Concept of Operations. Goals and objectives will also be established.
5. Requirements Review – Develop plan for design reviews to ensure the design meets the proposed requirements and stakeholder needs and expectations.
6. System Design – Develop high-level design focusing on project architecture mapping and detailed design to address how the local jurisdiction systems will interface with RADS and how the arterial information will be shared between partner agencies on the RADS network. Plans need to be developed to verify the system and subsystem operate in accordance with the requirements.
7. System Implementation – Review planned procurement process, software coding, database implementation, configuration of necessary components of system, including interfaces with local jurisdictions.
8. System Verification - develop procedures to test interfaces and data transfers to ensure the system is functioning as planned.
9. System Operation and Maintenance – develop an Operations and Maintenance Plan to include maintenance resources, responsibilities and system operations and maintenance procedures.
10. System Update – Develop a plan for future updates, enhancements and expansion of the local connections to the RADS program, including responsible entities and anticipated timeframe.

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls
Submit this Excel workbook to MAG via email to: LLUO@MAG.MARICOPA.GOV
Please use one worksheet per project, with the tab at the bottom indicating agency priority
Links to various websites are provided for additional information and help
The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas
The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Maricopa County Department of Transportation MMA-05
Other Partnering Agencies	N/A
ITS Project Title:	FY 2012 ITS Improvements: Olive Avenue Fiber Infrastructure

B. Project Goals & Objectives

Project Goals:

- Build the fiber infrastructure that will support operation and interconnectivity of existing and future MCDOT ITS devices;
- Improve signal coordination and enable traffic management from the MCDOT TMC in order to improve traffic flow, safety, and incident management, and to reduce vehicle emissions on the Olive Avenue corridor through the cities and towns of Peoria, Surprise, El Mirage, and Youngtown, and the community of Sun City;
- Improve special event traffic management related to Cardinals Stadium and the Glendale Arena;
- Contribute to an integrated regional ITS infrastructure by providing redundant communications capabilities for other agencies;
- Enhance freeway-arterial coordinated operations by direct connection to the ADOT FMS system on SR-101;
- Provide sources of traffic data that will ultimately be transferable to other jurisdictions by center-to-center communications via the planned Regional Community Network (RCN).

Objectives:

- Construct new conduit and install new fiber optic cable along Olive Avenue between Litchfield Road and SR-101;
- Install wireless connections to the MCDOT traffic management system and to additional traffic signals not directly along the conduit route;
- Interconnect 24 existing traffic signals and several mid-block detectors to the MCDOT traffic management system;
- Provide connectivity for 2 future arterial DMS (MCDOT funded);
- Coordinate with ADOT's FMS at the Olive Avenue/SR-101 interchange for immediate or future connection.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	No
Traveler Subsystem	No
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-Signal Controllers, DMS, Detectors	Center Subsystem-TMS	roadway information system status
		signal control status
		traffic flow
Center Subsystem-TMS	Roadside Subsystem-Signal Controller, DMS, Detectors	roadway information system data
		signal control data
		traffic sensor control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
MCDOT	ADOT	arterial traffic information	Fiber	Yes		
MCDOT	Surprise, Peoria, Glendale	arterial traffic information	Fiber	No	When RCN Phase 1 is built	

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.2, 1.3, 1.6, 1.7	ATMS01, ATMS03, ATMS06
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6	ATMS07
4. Integrated Traveler Information	Yes	1.2, 1.3	ATMS06, EM06, EM10
5. Archived Data Management	No		
6. Incident Management	No		
7. Freeway-Arterial	Yes	1.6	ATMS07

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.
(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.
(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$885,500.00	$379,500.00	$1,265,000.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Jul-2011
Receipt of ADOT project number	Sep-2011	Yes	2	Sep-2011
Initial DCR	Oct-2011	Yes	0	Jul-2011
Final DCR	Nov-2011	Yes	2	Sep-2011
30% Preliminary Plans, Cost Estimate and Report	Jan-2012	Yes	0	Jul-2011
60% Preliminary Plans, Cost Estimate and Report	Mar-2012	Yes	0	Jul-2011
Final Preliminary Plans, Cost Estimate and Report	May-2012	Yes	2	Sep-2011
Environmental Clearance	Mar-2012	Yes	10	May-2012
Utility Clearance	Apr-2012	Yes	1	Aug-2011
Right-of-Way Clearance	Jan-2012	Yes	1	Aug-2011
Approval of IGA	Jul-2012	Yes	6	Jan-2012
Obligation authority of Federal funds	Aug-2012	Yes	10	May-2012
Advertised Date	Oct-2012	Yes	12	Jul-2012
Final Deployment	Apr-2013	Yes	27	Oct-2013

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	7
Additional staff resources required for fully utilizing features added by project (FTEs)	0.25
Estimated current annual ITS operations & maintenance budget	$1,200,000
Estimated additional annual operations & maintenance funds required for features added by project	$37,950
Estimated DATE from when required additional O&M funds will be available	Oct-2013

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

Maricopa County DOT will incorporate a Systems Engineering Analysis in the scope of work for the project. The Systems Engineering Analysis will include but not be limited to the following:

1. Interface with the Regional ITS Architecture – Develop clear statement about project goals and objectives, and description of relevant subsystems, user services, and information transfer that satisfy the Regional ITS Architecture requirement.
2. Project Plan – Develop a plan that includes project tasks and interdependencies, budget, schedule, and timeframe, including key milestones.
3. Concept of Operations – Define a clear vision of how the project will meet the needs of stakeholders and how the system will operate under various scenarios. The Concept of Operations will describe how the new connections of this project will necessitate building upon existing operations and procedures at the MCDOT TMC.
4. System Requirements – Develop requirements, including user requirements and functional requirements. These will guide system expansion, and will be developed in conjunction with the Concept of Operations. This section will be building on established programs but will define new requirements for new devices. Goals and objectives will also be established.
5. Requirements Review – Plan for design reviews to ensure the design meets the proposed requirements and agency needs and expectations.
6. System Implementation – Review planned procurement process, software coding, database implementation, and configuration of necessary components of system, including interfaces with other jurisdictions.
7. System Verification – Develop procedures to test interfaces and data transfers to ensure the system is functioning as planned.
8. System Operation and Maintenance – Develop an Operations and Maintenance Plan to include maintenance resources, responsibilities, and system operations and maintenance procedures.
9. System Update – Develop a plan for future ITS deployments and software upgrades, including anticipated timeframe.

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls

Submit this Excel workbook to MAG via email to: LLUO@MAG.MARICOPA.GOV

Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Maricopa County Department of Transportation MMA-06
Other Partnering Agencies	City of Glendale, City of Peoria, City of Scottsdale
ITS Project Title:	REACT Expansion

B. Project Goals & Objectives

Project Goals:

- Enhance incident management to reduce incident clearance times and travel delays throughout the West Valley and in the City of Scottsdale;
- Provide traveler information related to incidents;
- Prevent secondary accidents.

Objectives:

- Establish new local REACT arterial incident response teams in the Cities of Glendale, Peoria, and Scottsdale, with ongoing program management from MCDOT, so that units can be quickly dispatched to incident locations in their jurisdictions;
- Build on the successful REACT expansion in Surprise;
- Expand REACT program to provide traffic management and traveler information support for incidents impacting major arterials.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	Yes
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Center Subsystem - Emergency Management (EM) [includes MCDOT and other local TMCs]	Vehicle Subsystem - Emergency Vehicle Subsystem	emergency dispatch requests
		suggested route

Vehicle Subsystem - Emergency Vehicle Subsystem (EVS)	Center Subsystem - Emergency Management (EM) [includes MCDOT and other local TMCs]	emergency dispatch response
		emergency vehicle tracking data
		incident status
Field Subsystem - Roadway Subsystem (RS) [truck-mounted DMS]	Terminator: Basic Vehicle*	traffic characteristics

*** This would need to be a custom flow in the architecture to account for the truck-mounted DMS.**

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
MCDOT & Surprise REACT Response Teams	Partner Agencies	incident information and traveler information	Radio and/or other media	Yes		
Glendale, Peoria, and Scottsdale REACT Response Teams	Partner Agencies	incident information and traveler information	Radio and/or other media	No	Mar-2009	

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	Yes	1.2, 1.6, 1.7	ATMS06, ATMS08, EM02, EM04
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6	ATMS07, ATMS08, EM01
4. Integrated Traveler Information	Yes	1.6	ATMS06
5. Archived Data Management	No		
6. Incident Management	Yes	1.7, 5.2	EM01, EM03, EM04
7. Freeway-Arterial Operations	Yes	1.6	ATMS03, ATMS04, ATMS07, ATMS08

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$867,200.00	$371,659.00	$1,238,859.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Jul-2008
Receipt of ADOT project number	Sep-2008	Yes	2	Sep-2008
Initial DCR	Oct-2008	Yes	2	Sep-2008
Final DCR	Nov-2008	Yes	4	Nov-2008
30% Preliminary Plans, Cost Estimate and Report	Jan-2009	No	0	NA
60% Preliminary Plans, Cost Estimate and Report	Mar-2009	No	0	NA
Final Preliminary Plans, Cost Estimate and Report	May-2009	Yes	7	Feb-2009
Environmental Clearance	Mar-2009	Yes	7	Feb-2009
Utility Clearance	Apr-2009	Yes	7	Feb-2009
Right-of-Way Clearance	Jan-2009	Yes	7	Feb-2009
Approval of IGA	Jul-2009	Yes	7	Feb-2009

Obligation authority of Federal funds	Aug-2009	Yes	7	Feb-2009
Advertised Date	Oct-2009	Yes	8	Mar-2009
Final Deployment	Apr-2010	Yes	34	May-2011

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	7
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$1,200,000
Estimated additional annual operations & maintenance funds required for features added by project	$15,000
Estimated DATE from when required additional O&M funds will be available	Jul-2010

Other comments:

Information provided is for MCDOT only. Additional annual operations & maintenance funds shall be agreed upon by partner agencies.

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

Maricopa County DOT will incorporate a Systems Engineering Analysis in the scope of work for the project. The Systems Engineering Analysis will include but not be limited to the following:

1. Interface with the Regional ITS Architecture – Develop clear statement about project goals and objectives, and description of relevant subsystems, user services, and information transfer that satisfy the Regional ITS Architecture requirement.
2. Project Plan – Develop a plan that includes the responsibility of the partner stakeholders and contractors, project tasks and interdependencies, schedule and timeframe, including key milestones, and 3-year project budget.
3. Concept of Operations – Define a clear vision of how the project will meet the needs of stakeholders and how the system will operate under various scenarios. The Concept of Operations will describe how local REACT will coordinate with MCDOT and will support development of procedures for local teams.
4. System Requirements – Develop requirements, including user requirements and functional requirements. This section will build upon established programs but will define new requirements for new response teams. These will guide system design and implementation, and will be developed with stakeholders in conjunction with the Concept of Operations. Goals and objectives will also be established.
5. System Implementation – Review planned procurement process, software coding, database implementation, and configuration of necessary components of system, including interfaces with local jurisdictions.
6. System Verification – Develop integration strategy between local TMC and MCDOT dispatch software.
7. System Operation and Maintenance – Develop an Operations and Maintenance Plan to include maintenance resources, responsibilities, and system operations and maintenance procedures.

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Mesa MES-01
Other Partnering Agencies	
ITS Project Title:	Downtown Mesa Connectivity FY2008

B. Project Goals & Objectives

Project Goals:

Mesa is expanding their ITS network and have a number of ITS field elements deployed around the City, including traffic signals, KMS< CCTV cameras, and system detectros. Mesa is converting their existing traffic signals from the older SONEX system to the newer ICONS traffic management system, using a systematic approach outlined in the telecommunications master plan, summarized in the City's ITS Strategic Plan.

Objectives:

Building on ITS Projects such as the Stapley Rd. ITS Project, the West Loop project, and the Broadway Rd. ITS Project by providing connectivity to the TMC, a means to transport video and data and maximizes the original investment in fiber optic infrastructure. Traffic monitoring where none previously existed, ability to provide wireless network access, and establishing communications to satelite facilities, and remote vehicle detection management are beneftis gained by this project. Mesa can utilize this equipment to provide a more efficient ITS system providing a quicker, more appropriate response to traffic congestion, and highlight the true potential of ITS devices and the positive impact they have on the motoring public.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Center	Roadside	signal control

Roadside	Center	Traffic video, detector
Roadside	Center	LRT status reports

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Mesa	Regional Partners	Video images, detector data, signal condition	fiber	Partial	Nov-2009	

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	Yes	1.6, 1.7	
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6, 1.7	
4. Integrated Traveler Information	No		
5. Archived Data Management	Yes	1.7	
6. Incident Management	Yes	1.7	
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$1,000,000.00	$1,220,000.00	$2,220,000.00
Cost percentage	45.0%	55.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2008
Receipt of ADOT project number	Jan-2009	Yes	2	Jan-2009
Initial DCR	Feb-2009	Yes	4	Feb-2009
Final DCR	Mar-2009	Yes	5	Mar-2009
30% Preliminary Plans, Cost Estimate and Report	May-2009	Yes	7	May-2009
60% Preliminary Plans, Cost Estimate and Report	Jul-2009	Yes	9	Jul-2009
Final Preliminary Plans, Cost Estimate and Report	Sep-2009	Yes	11	Oct-2009
Environmental Clearance	Jul-2009	Yes	9	Aug-2009
Utility Clearance	Aug-2009	Yes	10	Aug-2009
Right-of-Way Clearance	May-2009	Yes	10	Sep-2009

Approval of IGA	Nov-2009	Yes	14	Jan-2010
Obligation authority of Federal funds	Dec-2009	Yes	15	Jan-2010
Advertised Date	Feb-2010	Yes	18	Apr-2010
Final Deployment	Aug-2010	Yes	24	Oct-2010

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	11
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$675,000
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	

Other comments:

Project is currently in 60% design phase.

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Mesa MES-02
Other Partnering Agencies	ADOT
ITS Project Title:	US60 Corridor Relief FY2009

B. Project Goals & Objectives

Project Goals:

This project covers approximately 8.5 miles of arterials and includes segments of Dobson Road, Southern Avenue, Longmore, Extension Road, Alma School Road, and Baseline Road adjacent and parallel to US60 in Mesa. There are three radio tower locations, a CCTV camera, two buildings over five stories, Fiesta Mall, Mesa Community College, Banner Desert Hospital, and the Bank of America building in the project area. The project connects with existing fiber and conduit.

Objectives:

US60 currently experiences up to 192000 vehicles per day with severe congestions during peak hours of traffic. A major benefit that can be achieved through better communications is reduction of travel time. Better arterial progression reults in reduced traffic delay, lowered risks for accidents, decreased fuel consumption, improved air quality, and better emergency response times.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	Yes
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Center	Roadside	roadway conditions

Roadside	Center	video, detector data
Center	Traveler	vms, data

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Mesa	ADOT/Chandler/ Tempe/	traffic images	fiber	yes		
Mesa Transportation	Mesa Fire	traffic images	fiber	yes		
ADOT	Mesa	traffic images	fiber	No		
Mesa	ADOT/Chandler/	signal settings at	fiber	No	Mar-2007	

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**

1. Traffic Management	Yes	1.6	ATMS03,
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6	ATMS07
4. Integrated Traveler Information	Yes	1.5	ATMS06
5. Archived Data Management	Yes	1.8	ATMS03,ATMS06,
6. Incident Management	No		
7. Freeway-Arterial	Yes	1.7	ATMS07

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$1,000,000.00	$1,603,000.00	$2,603,000.00
Cost percentage	38.4%	61.6%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2009
Receipt of ADOT project number	Jan-2010	Yes	3	Feb-2010
Initial DCR	Feb-2010	Yes	3	Feb-2010
Final DCR	Mar-2010	Yes	4	Mar-2010
30% Preliminary Plans, Cost Estimate and Report	May-2010	No	0	NA
60% Preliminary Plans, Cost Estimate and Report	Jul-2010	Yes	7	Jun-2010
Final Preliminary Plans, Cost Estimate and Report	Sep-2010	Yes	9	Aug-2010
Environmental Clearance	Jul-2010	Yes	4	Mar-2010
Utility Clearance	Aug-2010	Yes	10	Aug-2010
Right-of-Way Clearance	May-2010	Yes	10	Sep-2010
Approval of IGA	Nov-2010	Yes	14	Jan-2011
Obligation authority of Federal funds	Dec-2010	Yes	12	Nov-2010
Advertised Date	Feb-2011	Yes	12	Nov-2010

Final Deployment	Aug-2011	Yes	24	Oct-2011

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	11
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$697,500
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	

Other comments:

This project is currently in 60% design status.

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Mesa MES-03
Other Partnering Agencies	
ITS Project Title:	West Broadway Road Corridor Relief FY2009

B. Project Goals & Objectives

Project Goals:

This project includes segments of Broadway Road, Dobson Road, Alma School Road, and Basleine Road adjacent to Loop 101 in Mesa. The project provides connectivity to 14 intersections, 13 of which are operating on the old system. The project covers a distance of approximately 4.0 miles. The project connects one radio tower location, an existing video detection system, and existing fiber and conduit on Loop 101 and on Dobosn and Alma School at Southern. Additional ITS devices (4 CCTV traffic monitoring cameras, 1 Dynamic Message Sign, 1 Video Detection System) will be added per Mesa's ITS Strategic Plan.

Objectives:

Broadway Road traffic volume is over 38,000 vehicles per day; this heavy volume impacts the operational characteristics for this arterial during peak hours. This project involves a major portion of vehicles that drive through Mesa on a daily basis. A major benefit that can be achieved through better communications is the reduction of travel time. Better arterial progression results in reduced traffic delay, lowered risks for accicnts, decreased fuel consumption, improved air quality, and better emergency response times.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	Yes
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Center	Traveler	Road conditions via DMS
Center	Roadside	Data and signal timing

Roadside	Center	Traffic images, detector information, signal conditions

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Mesa	ADOT, Tempe	Traffic images and detector information from bordering signals	fiber	Partial	Nov-2010	

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	Yes	1.6, 1.7	ATMS01, ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6, 1.7	ATMS01, ATMS03
4. Integrated Traveler Information	Yes	1.6. 1.7	ATMS01
5. Archived Data Management	Yes	1.6	ATMS01
6. Incident Management	Yes	1.7	ATMS01, ATMS03
7. Freeway-Arterial	Yes	1.6. 1.7	ATMS01, ATMS03,

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost

Amount	$1,000,000.00	$644,000.00	$1,644,000.00
Cost percentage	60.8%	39.2%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2009
Receipt of ADOT project number	Jan-2010	Yes	2	Jan-2010
Initial DCR	Feb-2010	Yes	4	Feb-2010
Final DCR	Mar-2010	Yes	5	Mar-2010
30% Preliminary Plans, Cost Estimate and Report	May-2010	Yes	7	May-2010
60% Preliminary Plans, Cost Estimate and Report	Jul-2010	Yes	9	Jul-2010
Final Preliminary Plans, Cost Estimate and Report	Sep-2010	Yes	11	Oct-2010
Environmental Clearance	Jul-2010	Yes	9	Aug-2010
Utility Clearance	Aug-2010	Yes	10	Aug-2010
Right-of-Way Clearance	May-2010	Yes	10	Sep-2010
Approval of IGA	Nov-2010	Yes	14	Jan-2011

Obligation authority of Federal funds	Dec-2010	Yes	15	Jan-2011
Advertised Date	Feb-2011	Yes	18	Apr-2011
Final Deployment	Aug-2011	Yes	24	Oct-2011

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	11
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$675,000
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	

Other comments:

This project is currently at 60% design.

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Mesa MES-04
Other Partnering Agencies	
ITS Project Title:	University Drive Corridor Enhancements FY2010

B. Project Goals & Objectives

Project Goals:

Mesa is converting their existing traffic signals from the older SONEX system to the newer ICONS traffic management system, using a systematic approach outlined in the telecommunications master plan, summarized I the City's ITS Strategic Plan. The projects deploys and upgrades ITS devices alaong existing fiber optic communications lines and installs 4-2" conduit (quad) duct, fiber optic cabling, and new ITS devices along University Drive. The project provides cpmmectivity to 14 signalized intersections and covers a distance of approximately 7.0 miles.

Objectives:

Better arterial progression results in reduced traffic delay, lowered risks for accidents, decreased fuel consuption, improved air quality, and better emergency response times. Additonal or upgraded ITS devices will improve overall system performance.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow

Center	Roadside	Signal control, Timing adjustments,
Roadside	Center	Traffic monitoring, detector information, signal conditions

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Mesa	Regional Partners	Signal timing information, video traffic images, detector information, incident information	fiber	Partial	Nov-2011	

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6, 1.7	ATMS01,ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	Yes	1.6, 1.7	ATMS01,ATMS03
6. Incident Management	Yes	1.6. 1.7	ATMS01,ATMS03
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$1,000,000.00	$1,594,400.00	$2,594,400.00
Cost percentage	38.5%	61.5%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2011
Receipt of ADOT project number	Jan-2012	Yes	2	Jan-2012
Initial DCR	Feb-2012	Yes	4	Feb-2012
Final DCR	Mar-2012	Yes	5	Mar-2012
30% Preliminary Plans, Cost Estimate and Report	May-2012	Yes	7	May-2012
60% Preliminary Plans, Cost Estimate and Report	Jul-2012	Yes	9	Jul-2012
Final Preliminary Plans, Cost Estimate and Report	Sep-2012	Yes	11	Oct-2012

Environmental Clearance	Jul-2012	Yes	9	Aug-2012
Utility Clearance	Aug-2012	Yes	10	Aug-2012
Right-of-Way Clearance	May-2012	Yes	10	Sep-2012
Approval of IGA	Nov-2012	Yes	14	Jan-2013
Obligation authority of Federal funds	Dec-2012	Yes	15	Jan-2013
Advertised Date	Feb-2013	Yes	18	Apr-2013
Final Deployment	Aug-2013	Yes	24	Oct-2013

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	11
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$675,000
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls

Submit this Excel workbook to MAG via email to: LLUO@MAG.MARICOPA.GOV

Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Mesa MES-05
Other Partnering Agencies	
ITS Project Title:	Dobson Ranch Ring Integrity FY2012

B. Project Goals & Objectives

Project Goals:

This project includes deploying and upgrading ITS devices along existing fiber optic communiations line on Dobson Rd. The project also inclludes installing 4-2" conduit (quad) duct, fiber optic cabling, and ITS devices along Guadalupe and Alma School. The project provides for 8 signalized intersections to be upgraded from the old system. The project covers approximately 4.5 miles and incorporates one adio tower. Connectivity to the final remaining signals in west Mesais achieved by this project.

Objectives:

A major benefit can be achieved through improved communication, the ability to maintain the coordination and control of the signals. If the equipment is not relocated to the newer system, the existing system will eventually fail and the signals will no longer be under master control.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	Yes
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Center	Roadside	Signal timing data,

Roadside	Center	Traffic images, detector data, signal operation, DMS status
Center	Traveler	Roadway conditions via DMS

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Mesa	Regional partners	Signal status, traffic images, and detector information	Fiber	no	Nov-2013	

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	Yes	1.6, 1.7	ATMS01,ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6, 1.7	ATMS01,ATMS03
4. Integrated Traveler Information	Yes	1.6, 1.7	ATMS01,ATMS03
5. Archived Data Management	Yes	1.6	ATMS01,ATMS03
6. Incident Management	Yes	1.6	ATMS01,ATMS03
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$1,000,000.00	$547,000.00	$1,547,000.00
Cost percentage	64.6%	35.4%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2012
Receipt of ADOT project number	Jan-2013	Yes	0	Nov-2012
Initial DCR	Feb-2013	Yes	3	Feb-2013
Final DCR	Mar-2013	Yes	4	Mar-2013
30% Preliminary Plans, Cost Estimate and Report	May-2013	Yes	5	Apr-2013
60% Preliminary Plans, Cost Estimate and Report	Jul-2013	Yes	7	Jun-2013
Final Preliminary Plans, Cost Estimate and Report	Sep-2013	Yes	9	Aug-2013
Environmental Clearance	Jul-2013	Yes	4	Mar-2013
Utility Clearance	Aug-2013	Yes	12	Nov-2013
Right-of-Way Clearance	May-2013	Yes	12	Nov-2013

Approval of IGA	Nov-2013	Yes		Nov-2012
Obligation authority of Federal funds	Dec-2013			NA
Advertised Date	Jan-2014	Yes	12	Nov-2013
Final Deployment	Aug-2014			NA

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	11
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$675,000
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Town of Queen Creek QNC-01
Other Partnering Agencies	N/A
ITS Project Title:	Queen Creek Town Center ITS Project

B. Project Goals & Objectives

Project Goals:

To facilitate the coordinated flow of the heavy traffic volumes that are expected throughout the Town Center area, thereby reducing congestion, improving travel speeds on major arterials, and improving air quality. Efforts to be focused on principal arterials (Ellsworth Rd/Ellsworth Loop Rd and Rittenhouse Rd) which are primary routes for regional through traffic.

To build the foundation of a central traffic management system to which other signals and ITS devices can be connected in subsequent projects.

Objectives:

Provide communications to 10 new traffic signals being constructed under another project;
Install and provide communications to 6 new CCTVs to monitor Town Center area traffic flows;
Install and provide communications between Town Center ITS system and Development Services Bldg.;
Provide hardware and software for central management of traffic signals (Town Center and Townwide); and
Provide hardware and software for central monitoring of CCTV cameras (Town Center and Townwide).

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-CCTV, Signal Controller	Center Subsystem-TMC	traffic images
		signal control status

Center Subsystem-TMC	Roadside Subsystem-Signal Controler, CCTV	signal control data
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Queen Creek	MCDOT, Mesa, Gilbert	signal settings at boundary locations	Fiber/Leased line	No	Unknown	Error, need to have the communications first
MCDOT, Mesa, Gilbert	Queen Creek	video images for boundary locations	Fiber/Leased line	No	Unknown	Error, need to have the communications first

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	Yes	1.6	ATMS01, ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	Yes	1.7	ATMS08
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost

Amount	$563,600.00	$917,100.00	$1,480,700.00
Cost percentage	38.1%	61.9%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2007
Receipt of ADOT project number	Jan-2008	Yes	2	Jan-2008
Initial DCR	Feb-2008	No		NA
Final DCR	Mar-2008	No		NA
30% Preliminary Plans, Cost Estimate and Report	May-2008	No		NA
60% Preliminary Plans, Cost Estimate and Report	Jul-2008	Yes	5	Apr-2008
Final Preliminary Plans, Cost Estimate and Report	Sep-2008	Yes	7	Jun-2008
Environmental Clearance	Jul-2008	No		NA
Utility Clearance	Aug-2008	Yes	7	Jun-2008
Right-of-Way Clearance	May-2008	Yes	7	Jun-2008
Approval of IGA	Nov-2008	Yes	7	Jun-2008
Obligation authority of Federal funds	Dec-2008	Yes	8	Jul-2008

Advertised Date	Feb-2009	No		NA
Final Deployment	Aug-2009	Yes	12	Nov-2008

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	2
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$0
Estimated additional annual operations & maintenance funds required for features added by project	$15,000
Estimated DATE from when required additional O&M funds will be available	Nov-2008

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The Town of Queen Creek intends to incorporate the Systems Engineering Analysis in the scope of work for the project's design. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls

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The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Town of Queen Creek QNC-02
Other Partnering Agencies	N/A
ITS Project Title:	Rittenhouse ITS Project, Phase A

B. Project Goals & Objectives

Project Goals:

To facilitate the coordinated flow of the heavy traffic volumes along this key cross-town corridor, thereby reducing congestion, improving travel speeds, and improving air quality.

Rittenhouse Rd is a primary route for regional through traffic, providing a diagonal "short-cut" path for traffic between Queen Creek, Gilbert, Mesa, and northern Pinal County, as well as a critical access route for major residential and commerical traffic generators.

Objectives:

Provide communications to 4 new traffic signals anticipated or being constructed under other projects;
Install and provide communications to 2 new CCTVs to monitor area traffic flows; and
Integrate the signals and new ITS devices into the Town Center ITS system and central traffic management functions at the Development Services Bldg.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-CCTV, Signal Controller	Center Subsystem-TMC	traffic images

Signal Controller	Subsystem-TMC	signal control status
Center Subsystem-TMC	Roadside Subsystem-Signal Controler, CCTV	signal control data
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Queen Creek	MCDOT, Mesa, Gilbert	signal settings at boundary locations	Fiber/Leased line	No	Unknown	Error, need to have the communications first
MCDOT, Mesa, Gilbert	Queen Creek	video images for boundary locations	Fiber/Leased line	No	Unknown	Error, need to have the communications first

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	Yes	1.6	ATMS01, ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	Yes	1.7	ATMS08
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$172,700.00	$284,400.00	$457,100.00
Cost percentage	37.8%	62.2%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2008
Receipt of ADOT project number	Jan-2009	Yes	2	Jan-2009
Initial DCR	Feb-2009	No		NA
Final DCR	Mar-2009	No		NA
30% Preliminary Plans, Cost Estimate and Report	May-2009	No		NA
60% Preliminary Plans, Cost Estimate and Report	Jul-2009	Yes	5	Apr-2009
Final Preliminary Plans, Cost Estimate and Report	Sep-2009	Yes	7	Jun-2009
Environmental Clearance	Jul-2009	No		NA

Utility Clearance	Aug-2009	Yes	7	Jun-2009
Right-of-Way Clearance	May-2009	Yes	7	Jun-2009
Approval of IGA	Nov-2009	Yes	7	Jun-2009
Obligation authority of Federal funds	Dec-2009	Yes	8	Jul-2009
Advertised Date	Feb-2010	No		NA
Final Deployment	Aug-2010	Yes	12	Nov-2009

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	2
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$0
Estimated additional annual operations & maintenance funds required for features added by project	$5,000
Estimated DATE from when required additional O&M funds will be available	Nov-2009

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The Town of Queen Creek intends to incorporate the Systems Engineering Analysis in the scope of work for the project's design. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Town of Queen Creek QNC-03
Other Partnering Agencies	N/A
ITS Project Title:	Ellsworth ITS Project, Phase A

B. Project Goals & Objectives

Project Goals:

To facilitate the coordinated flow of the heavy traffic volumes along this key MAG Road of Regional Significance, thereby reducing congestion, improving travel speeds, and improving air quality.

Objectives:

Provide communications to 6 new traffic signals anticipated or being constructed under other projects;
Install and provide communications to 3 new CCTVs to monitor area traffic flows; and
Integrate the signals and new ITS devices into the Town Center ITS system and central traffic management functions at the Development Services Bldg.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-CCTV, Signal Controller	Center Subsystem-TMC	traffic images

Signal Controller	Subsystem-TMC	signal control status
Center Subsystem-TMC	Roadside Subsystem-Signal Controler, CCTV	signal control data
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Queen Creek	MCDOT, Mesa, Gilbert	signal settings at boundary locations	Fiber/Leased line	No	Unknown	Error, need to have the communications first
MCDOT, Mesa, Gilbert	Queen Creek	video images for boundary locations	Fiber/Leased line	No	Unknown	Error, need to have the communications first

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6	ATMS01, ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	Yes	1.7	ATMS08
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$255,200.00	$176,200.00	$431,400.00
Cost percentage	59.2%	40.8%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2012
Receipt of ADOT project number	Jan-2013	Yes	2	Jan-2013
Initial DCR	Feb-2013	No		NA
Final DCR	Mar-2013	No		NA
30% Preliminary Plans, Cost Estimate and Report	May-2013	No		NA
60% Preliminary Plans, Cost Estimate and Report	Jul-2013	Yes	5	Apr-2013
Final Preliminary Plans, Cost Estimate and Report	Sep-2013	Yes	7	Jun-2013

Environmental Clearance	Jul-2013	No		NA
Utility Clearance	Aug-2013	Yes	7	Jun-2013
Right-of-Way Clearance	May-2013	Yes	7	Jun-2013
Approval of IGA	Nov-2013	Yes	7	Jun-2013
Obligation authority of Federal funds	Dec-2013	Yes	8	Jul-2013
Advertised Date	Feb-2014	No		NA
Final Deployment	Aug-2014	Yes	12	Nov-2013

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	2
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$0
Estimated additional annual operations & maintenance funds required for features added by project	$10,000
Estimated DATE from when required additional O&M funds will be available	Nov-2012

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The Town of Queen Creek intends to incorporate the Systems Engineering Analysis in the scope of work for the project's design. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
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Please use one worksheet per project, with the tab at the bottom indicating agency priority

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Scottsdale SCT-01
Other Partnering Agencies	Tempe, Phoenix
ITS Project Title:	Controller replacement

B. Project Goals & Objectives

Project Goals:

Update existing controllers to accept new firmware and increase the ability to reduce conjestion through automation of data collection, i.e. traffic responsive signal timing. Have compatable controller firmware with Phoenix and Tempe.

Objectives:

Replace outdated signal controllers with 6800 microprocessors, which are no longer manufactured. Update firmware on signal controllers to allow for signal timing features that are not available on the current controllers or firmware. The update will include cabinet replacements at specific intersections that will expand current detection inputs from 8 to 64, where required.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	YES
Traveler Subsystem	NO
Field/Roadside Subsystem	NO
Vehicle Subsystem	NO
Communications Subsystem	YES

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-CCTV, Signal Controller	Center Subsystem-TMC	traffic images

Signal Controler	Subsystem-TMC	signal control status
Center Subsystem-TMC	Roadside Subsystem-Signal Controler,	signal control data
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Scottsdale	Phoenix, Tempe	Signal control, data backup at boardering intersections	Fiber	NO	Jun-2008	

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	YES	1.6	ATMS01, ATMS03
2. Transit Operations Support	NO		
3. Interagency Data Sharing and Control	NO		
4. Integrated Traveler Information	NO		
5. Archived Data Management	NO		
6. Incident Management	NO		
7. Freeway-Arterial	NO		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$250,000.00	$250,000.00	$500,000.00
Cost percentage	50.0%		

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2007
Receipt of ADOT project number	Jan-2008	YES	2	Jan-2008
Initial DCR	Feb-2008	YES	3	Feb-2008
Final DCR	Mar-2008	YES	4	Mar-2008
30% Preliminary Plans, Cost Estimate and Report	May-2008	YES	2	Jan-2008
60% Preliminary Plans, Cost Estimate and Report	Jul-2008	YES	2	Jan-2008
Final Preliminary Plans, Cost Estimate and Report	Sep-2008	YES	2	Jan-2008
Environmental Clearance	Jul-2008	YES	6	May-2008
Utility Clearance	Aug-2008	YES	3	Feb-2008
Right-of-Way Clearance	May-2008	YES	6	May-2008

PS&E Approval	Dec-2008	YES	6	May-2008
Bid opening	Feb-2009	YES	8	Jul-2008
Final Deployment	Aug-2009	YES	12	Nov-2008

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	4
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$50K
Estimated additional annual operations & maintenance funds required for features added by project	$20K
Estimated DATE from when required additional O&M funds will be available	Jul-2006

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls

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Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Scottsdale SCT-02
Other Partnering Agencies	Tempe, Phoenix
ITS Project Title:	Controller replacement

B. Project Goals & Objectives

Project Goals:

Update existing controllers to accept new firmware and increase the ability to reduce conjestion through automation of data collection, i.e. traffic responsive signal timing. Have compatable controller firmware with Phoenix and Tempe.

Objectives:

Replace outdated signal controllers with 6800 microprocessors, which are no longer manufactured. Update firmware on signal controllers to allow for signal timing features that are not available on the current controllers or firmware. The update will include cabinet replacements at specific intersections that will expand current detection inputs from 8 to 64, where required.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	YES
Traveler Subsystem	NO
Field/Roadside Subsystem	NO
Vehicle Subsystem	NO
Communications Subsystem	YES

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-CCTV, Signal Controller	Center Subsystem-TMC	traffic images

Signal Controler	Subsystem-TMC	signal control status
Center Subsystem-TMC	Roadside Subsystem-Signal Controler,	signal control data
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Scottsdale	Phoenix, Tempe	Signal control, data backup at boardering intersections	Fiber	NO	Jun-2009	

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	YES	1.6	ATMS01, ATMS03
2. Transit Operations Support	NO		
3. Interagency Data Sharing and Control	NO		
4. Integrated Traveler Information	NO		
5. Archived Data Management	NO		
6. Incident Management	NO		
7. Freeway-Arterial	NO		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$250,000.00	$250,000.00	$500,000.00
Cost percentage	50.0%	50.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2008
Receipt of ADOT project number	Jan-2009	YES	2	Jan-2009
Initial DCR	Feb-2009	YES	3	Feb-2009
Final DCR	Mar-2009	YES	4	Mar-2009
30% Preliminary Plans, Cost Estimate and Report	May-2009	YES	2	Jan-2009
60% Preliminary Plans, Cost Estimate and Report	Jul-2009	YES	2	Jan-2009
Final Preliminary Plans, Cost Estimate and Report	Sep-2009	YES	2	Jan-2009
Environmental Clearance	Jul-2009	YES	6	May-2009
Utility Clearance	Aug-2009	YES	3	Feb-2009
Right-of-Way Clearance	May-2009	YES	6	May-2009

PS&E Approval	Dec-2009	YES	6	May-2009
Bid opening	Feb-2010	YES	8	Jul-2009
Final Deployment	Aug-2010	YES	12	Nov-2009

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	4
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$50K
Estimated additional annual operations & maintenance funds required for features added by project	$20K
Estimated DATE from when required additional O&M funds will be available	Jul-2006

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Scottsdale SCT-03
Other Partnering Agencies	Tempe, Phoenix
ITS Project Title:	Controller replacement

B. Project Goals & Objectives

Project Goals:

Update existing controllers to accept new firmware and increase the ability to reduce conjestion through automation of data collection, i.e. traffic responsive signal timing. Have compatable controller firmware with Phoenix and Tempe.

Objectives:

Replace outdated signal controllers with 6800 microprocessors, which are no longer manufactured. Update firmware on signal controllers to allow for signal timing features that are not available on the current controllers or firmware. The update will include cabinet replacements at specific intersections that will expand current detection inputs from 8 to 64, where required.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	YES
Traveler Subsystem	NO
Field/Roadside Subsystem	NO
Vehicle Subsystem	NO
Communications Subsystem	YES

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-CCTV, Signal Controller	Center Subsystem-TMC	traffic images

Signal Controler	Subsystem-TMC	signal control status
Center Subsystem-TMC	Roadside Subsystem-Signal Controler,	signal control data
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Scottsdale	Phoenix, Tempe	Signal control, data backup at boardering intersections	Fiber	NO	Jun-2009	

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	YES	1.6	ATMS01, ATMS03
2. Transit Operations Support	NO		
3. Interagency Data Sharing and Control	NO		
4. Integrated Traveler Information	NO		
5. Archived Data Management	NO		
6. Incident Management	NO		
7. Freeway-Arterial	NO		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

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(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$250,000.00	$250,000.00	$500,000.00
Cost percentage	50.0%		

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2009
Receipt of ADOT project number	Jan-2010	YES	2	Jan-2010
Initial DCR	Feb-2010	YES	3	Feb-2010
Final DCR	Mar-2010	YES	4	Mar-2010
30% Preliminary Plans, Cost Estimate and Report	May-2010	YES	2	Jan-2010
60% Preliminary Plans, Cost Estimate and Report	Jul-2010	YES	2	Jan-2010
Final Preliminary Plans, Cost Estimate and Report	Sep-2010	YES	2	Jan-2010
Environmental Clearance	Jul-2010	YES	6	May-2010
Utility Clearance	Aug-2010	YES	3	Feb-2010
Right-of-Way Clearance	May-2010	YES	6	May-2010

PS&E Approval	Dec-2010	YES	6	May-2010
Bid opening	Feb-2011	YES	8	Jul-2010
Final Deployment	Aug-2011	YES	12	Nov-2010

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	4
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$50K
Estimated additional annual operations & maintenance funds required for features added by project	$20K
Estimated DATE from when required additional O&M funds will be available	Jul-2006

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Scottsdale SCT-04
Other Partnering Agencies	
ITS Project Title:	Installation of DMS

B. Project Goals & Objectives

Project Goals:

The goal is to reduce conjestion by informing drivers in advance of potential traffic delays from accidents and incidents. The DMS installations will give real-time direction to motorist on the roads that effect them directly.

Objectives:

The objective is to install the remaining 10 DMS signs in the northern portion of Scottsdale. This will include the area bounded by Shea to Carefree Highway to the north, and 56th Street to 136th Street to the east.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow

Traffic Management	Roadway Subsystems	Roadway System information Date
Center Subsystem-TMC	Roadside Subsystem-Signal Controler, CCTV	DMS Control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	**To agency**	**data flow**	**Medium**	**Existing?**	**Future (year) mm/yyyy**	**Check Date with Project Schedule**
Scottsdale	Phoenix, Tempe	DMS Control with ADOT, County, Phoenix and Tempe	Fiber	NO	Jun-2011	

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	YES	1.6	ATMS01, ATMS03
2. Transit Operations Support	Yes	1.1, 1.2, 1.3, 1.6, 1.7	ATMS07, ATMS 08, MC 07, MC 10
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	No		
7. Freeway-Arterial	No		

D. Project Budget

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(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$250,000.00	$250,000.00	$500,000.00
Cost percentage	50.0%	50.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2009
Receipt of ADOT project number	Jan-2010	YES	2	Jan-2010
Initial DCR	Feb-2010	YES	3	Feb-2010
Final DCR	Mar-2010	YES	4	Mar-2010
30% Preliminary Plans, Cost Estimate and Report	May-2010	YES	2	Jan-2010
60% Preliminary Plans, Cost Estimate and Report	Jul-2010	YES	2	Jan-2010
Final Preliminary Plans, Cost Estimate and Report	Sep-2010	YES	2	Jan-2010
Environmental Clearance	Jul-2010	YES	6	May-2010
Utility Clearance	Aug-2010	YES	3	Feb-2010

Right-of-Way Clearance	May-2010	YES	6	May-2010
PS&E Approval	Dec-2010	YES	6	May-2010
Bid opening	Feb-2011	YES	8	Jul-2010
Final Deployment	Aug-2011	YES	12	Nov-2010

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	4
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$50K
Estimated additional annual operations & maintenance funds required for features added by project	$20K
Estimated DATE from when required additional O&M funds will be available	Jul-2011

check project schedule

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	Surprise SUR-01
Other Partnering Agencies	N/A
ITS Project Title:	SUR 2008: CCTV Cameras

B. Project Goals & Objectives

Project Goals:

Install CCTV cameras at the intersections where Bell Road Fiber Phase 1 did not.

Objectives:

Procure and install three CCTV cameras at 134th Drive, Dysart Road, and Coyote Lakes Blvd.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-CCTV, Signal Controler	Center Subsystem-TMC	traffic images
		signal control status

Center Subsystem-TMC	Roadside Subsystem-Signal Controler, CCTV	signal control data
		video surveillance control

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6 Traffic Control	ATMS01 ATMS03

2. Transit Operations Support	Yes	2.2 En-route Transit Information	APTS7 and 8
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	Yes	1.7 Incident management	ATMS08
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

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(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$20,000.00	$10,000.00	$30,000.00
Cost percentage	66.7%	33.3%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Nov-2007
Receipt of ADOT project number	Jan-2008	Yes	2	Jan-2008
Initial DCR	Feb-2008			NA
Final DCR	Mar-2008			NA
30% Preliminary Plans, Cost Estimate and Report	May-2008			NA
60% Preliminary Plans, Cost Estimate and Report	Jul-2008			NA
Final Preliminary Plans, Cost Estimate and Report	Sep-2008			NA
Environmental Clearance	Jul-2008	Yes	3	Feb-2008
Utility Clearance	Aug-2008			NA
Right-of-Way Clearance	May-2008			NA
Approval of IGA	Nov-2008	Yes		Nov-2007
Obligation authority of Federal funds	Dec-2008			NA
Advertised Date	Feb-2009			NA
Final Deployment	Aug-2009	Yes	3	Feb-2008

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	2
Additional staff resources required for fully utilizing features added by project (FTEs)	None
Estimated current annual ITS operations & maintenance budget	$20,000
Estimated additional annual operations & maintenance funds required for features added by project	None
Estimated DATE from when required additional O&M funds will be available	Jul-2007

Other comments:

This will procure equipment (CCTV Cameras) and install them to the existing Bell Road fiber optics Phase 1.

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

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The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Surprise SUR-02
Other Partnering Agencies	N/A
ITS Project Title:	SUR2012: Bell Road Phase III: Loop 303 to 195th Alignment

B. Project Goals & Objectives

Project Goals:

Design, construct and impliment fiber oprtics, CCTV, VMS, and signal control to efficiently manage traffic conditions.

Objectives:

Expand the Bell Road fiber from Loop 303 west four miles to 195th Ave, install VMS and CCTV Cameras and obtain control via the fiber of all the existing and future traffic signals between.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadside Subsystem-CCTV, Signal Controler	TMC	traffic images
		signal control status
Center Subsystem-TMC	Signal Controler,	signal control data
		video surveillance control

	CCTV, VMS	VMS traveler info

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
Surprise	ADOT	video images,	fiber	No		
		signal control				

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6 Traffic Control	ATMS01, ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	No		

4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	Yes	1.7 Incident Management	ATMS08
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

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(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$1,200,000.00	$1,000,000.00	$2,200,000.00
Cost percentage	54.5%	45.5%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time to Milestone (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Jul-2011
Receipt of ADOT project number	Sep-2011	Yes	2	Sep-2011
Initial DCR	Oct-2011	Yes	4	Oct-2011
Final DCR	Nov-2011	Yes	5	Nov-2011
30% Preliminary Plans, Cost Estimate and Report	Jan-2012	Yes	7	Jan-2012
60% Preliminary Plans, Cost Estimate and Report	Mar-2012	Yes	9	Mar-2012
Final Preliminary Plans, Cost Estimate and Report	May-2012	Yes	11	Jun-2012
Environmental Clearance	Mar-2012	Yes	9	Apr-2012
Utility Clearance	Apr-2012	Yes	10	Apr-2012
Right-of-Way Clearance	Jan-2012	Yes	10	May-2012
Approval of IGA	Jul-2012	Yes		Jul-2011
Obligation authority of Federal funds	Aug-2012	Yes	15	Sep-2012
Advertised Date	Oct-2012	Yes	18	Dec-2012
Final Deployment	Apr-2013	Yes	24	Jun-2013

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs) 2

Additional staff resources required for fully utilizing features added by project (FTEs)	None
Estimated current annual ITS operations & maintenance budget	$20,000
Estimated additional annual operations & maintenance funds required for features added by project	None
Estimated DATE from when required additional O&M funds will be available	Jul-2010

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

Please enter project data ONLY in highlighted cells, save the file with the lead agency name in it - ie. Mesa ITS Projects.xls

Submit this Excel workbook to MAG via email to: LLUO@MAG.MARICOPA.GOV

Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Tempe TMP-01
Other Partnering Agencies	n/a
ITS Project Title:	Procure and Install Malfunction Management Units in all traffic control cabinets

B. Project Goals & Objectives

Project Goals:

Tempe operates and maintains 200 traffic signals including all ADOT traffic interchanges within the city boundaries. A central traffic control computer system, which has the capability of adjusting traffic signal timing patterns based on time of day operation, controls these signals. Within the scope of our recent signal system projects, the city has replaced traffic signal control cabinets with NEMA TS2 cabinets and equipped each cabinet with an existing signal controller and malfunction management unit (MMU). To take advantage of the NEMA TS2 equipment platform and refresh our aging signal controller inventory, the city proposed to upgrade its signal controllers with new NEMA TS2 signal controllers on a programmed basis. To complete this modernization, the city proposes to replace the existing MMUs citywide. This equipment upgrade will enhance interchangeability of cabinet components, enhance system reliability, increase system diagnostic capabilities, and reduce liability exposure.

Objectives:

This project will improve the reliability and safety of the traffic signal control operation. The upgraded Malfunction Management Units will provide the city's signal technicians with enhanced diagnostic tools to troubleshoot intersection malfunctions. These enhanced capabilities will facilitate increased intersection reliability and ultimately provide for safer traffic control operations. This project requires no new design, no right-of-way acquisition and no construction. This project is consistent with the regional transportation program as well as the local Capital Improvement Program.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Roadway	Traffic Management	signal control status

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	YES	1.6	ATMS01, ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	YES	1.7	ATMS08

7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$157,262.00	$67,398.00	$224,660.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Feb-2008
Receipt of ADOT project number	Apr-2008	no		NA
Initial DCR	May-2008	no		NA
Final DCR	Jun-2008	no		NA
30% Preliminary Plans, Cost Estimate and Report	Aug-2008	no		NA

60% Preliminary Plans, Cost Estimate and Report	Oct-2008	no		NA
Final Preliminary Plans, Cost Estimate and Report	Dec-2008	no		NA
Environmental Clearance	Oct-2008	no		NA
Utility Clearance	Nov-2008	no		NA
Right-of-Way Clearance	Aug-2008	no		NA
PS&E Approval	Mar-2009	yes	4	Jun-2008
Bid opening	May-2009	yes	5	Jul-2008
Final Deployment	Nov-2009	yes	13	Mar-2009

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	5
Additional staff resources required for fully utilizing features added by project (FTEs)	0
Estimated current annual ITS operations & maintenance budget	$160,000
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
MAG ITS Project Data Form

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Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Tempe TMP-02
Other Partnering Agencies	n/a
ITS Project Title:	ITS Network Engineer to support the City's ITS components

B. Project Goals & Objectives

Project Goals:

To hire an individual full-time for two years that will provide high level electronic and technical support of the City's Intelligent Transportation System components. To perform technical work in the long-range planning, design and management of the Intelligent Transportation System utilized by the City. Program, troubleshoot, repair, maintain and operate existing and future ITS components.

Tempe will be requesting to permanently add a full-time ITS network engineer to our staff in 2010 as part of the CIP budget

Objectives:

This project will provide funding for two years to hire an ITS network engineer to support operations and maintenance activities for the advancing ITS technologies that Tempe is installing. These technologies improve reliability and safety of the traffic signal control operation, facilitate increased intersection reliability and ultimately provide for safer and more efficient traffic control operations. Accident and incident management will be enhanced by additional monitoring capabilities while simultaneously allowing the transportation management staff the ability to monitor private and public transportation vehicles throughout the Tempe segment of light rail transportation facility, maximizing multi-modal coordination and safety operations. This project promotes multi-jurisdictional congestion relief goals by providing a platform to better maintain, operate and coordinate traffic signals as well as to respond to accidents/incidents in a more cooperative and efficient process.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	No
Traveler Subsystem	No
Field/Roadside Subsystem	No
Vehicle Subsystem	No
Communications Subsystem	No

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6	ATMS01, ATMS03
2. Transit Operations Support	Yes	2.4	APTS5
3. Interagency Data Sharing and Control	Yes	1.6	ATMS07, APTS7

4. Integrated Traveler Information	Yes	1.1	ATIS2
5. Archived Data Management	Yes	7.1	AD1
6. Incident Management	Yes	1.7	ATMS08
7. Freeway-Arterial	Yes	1.6, 1.7	ATMS04

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$135,975.00	$58,275.00	$194,250.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Feb-2008
Receipt of ADOT project number	Apr-2008	no		NA
Initial DCR	May-2008	no		NA
Final DCR	Jun-2008	no		NA
30% Preliminary Plans, Cost Estimate and Report	Aug-2008	no		NA
60% Preliminary Plans, Cost Estimate and Report	Oct-2008	no		NA
Final Preliminary Plans, Cost Estimate and Report	Dec-2008	no		NA
Environmental Clearance	Oct-2008	no		NA
Utility Clearance	Nov-2008	no		NA
Right-of-Way Clearance	Aug-2008	no		NA
PS&E Approval	Mar-2009	no		NA
Bid opening	May-2009	Yes	1	Mar-2008
Final Deployment	Nov-2009	Yes	3	May-2008

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	5
Additional staff resources required for fully utilizing features added by project (FTEs)	0

Estimated current annual ITS operations & maintenance budget	$160,000
Estimated additional annual operations & maintenance funds required for features added by project	$0
Estimated DATE from when required additional O&M funds will be available	

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
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The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Tempe TMP-04
Other Partnering Agencies	n/a
ITS Project Title:	Video Traffic Detection

B. Project Goals & Objectives

Project Goals:

The City currently utilizes tube counting and physical turning movement count technologies to obtain traffic count data for major arterials and intersections. This project proposes to utilize video detection and CCTV monitoring at arterial / arterial traffic signals to obtain real-time, 24 hours per day, 7 days per week turning movement count data. Utilizing the video detection equipment will also assist in better managing arterial operations due to the video that is provided by the video detection device. Additionally, several CCTV cameras will be installed at strategic locations to assist in real-time monitoring of the accuracy of the video detection devices and enhance congestion monitoring capabilities.

Objectives:

This project mitigates congestion through enhanced traffic data collection and regional multi-agency signal coordination. Traffic speed improvements and /or traffic management strategies can be coordinated with real-time data sharing to better manage signal timing on the street networks. The City will be able to adjust traffic signal timing through centralized command and control strategies designed to help relieve or minimize congestion.

C. Define ITS Subsystems, Achitecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Traffic Management	Archived Data Management Subsystem	traffic archive data
Roadway	Traffic Management	traffic flow data
Traffic Management	Roadway	video surveillance control

Roadway	Traffic Management	traffic images
Traffic Management	Emergency Management	traffic images

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
City of Tempe	MCDOT	traffic archive data	fiber	yes		

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6	ATMS01, ATMS03
2. Transit Operations Support	No		

3. Interagency Data Sharing and Control	No		
4. Integrated Traveler Information	Yes	1.1	ATIS2
5. Archived Data Management	Yes	7.1	AD1
6. Incident Management	Yes	1.7	ATMS08
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$324,236.00	$138,959.00	$463,195.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Feb-2009
Receipt of ADOT project number	Apr-2009	No		NA
Initial DCR	May-2009	No		NA
Final DCR	Jun-2009	No		NA
30% Preliminary Plans, Cost Estimate and Report	Aug-2009	No		NA
60% Preliminary Plans, Cost Estimate and Report	Oct-2009	No		NA
Final Preliminary Plans, Cost Estimate and Report	Dec-2009	No		NA
Environmental Clearance	Oct-2009	No		NA
Utility Clearance	Nov-2009	No		NA
Right-of-Way Clearance	Aug-2009	No		NA
PS&E Approval	Mar-2010	Yes	4	Jun-2009
Bid opening	May-2010	Yes	5	Jul-2009
Final Deployment	Nov-2010	Yes	13	Mar-2010

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	5
Additional staff resources required for fully utilizing features added by project (FTEs)	0.25

Estimated current annual ITS operations & maintenance budget	$160,000
Estimated additional annual operations & maintenance funds required for features added by project	$16,000
Estimated DATE from when required additional O&M funds will be available	Jul-2009

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

FY 2008 - 2012 TIP - Programming 2008, 2009, 2010, 2012
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The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Tempe TMP-05
Other Partnering Agencies	n/a
ITS Project Title:	Design-Build Fiber Optic Cable Installations

B. Project Goals & Objectives

Project Goals:

The City currently utilizes leased telephone lines to facilitate command and control operations at signalized intersections. This project proposes to utilize existing conduits placed in partnership with telecommunication companies to bring fiber optic communications to signalized intersections along various roadway corridors throughout the City. The fiber runs will tie into the ADOT FMS Fiber optic infrastructure as the communications media for command and control operations. Utilizing the existing conduits and the state-owned infrastructure will eliminate the need for leased telephone service to the intersections and increase bandwidth to allow for installation of real-time video detection (data

gathering) and CCTV monitoring. This upgrade will require minimal design and construction due to conduits already being in place and the close proximity of the terminating traffic signal control cabinet to the ADOT fiber optic backbone.

Objectives:

This project mitigates congestion through enhanced regional multi-agency signal coordination and maximizes the use of existing communications infrastructure. Traffic speed improvements and /or traffic management strategies can be coordinated with real-time data sharing to better manage major accidents and / or incidents on the street or freeway network. The City will be able to monitor traffic conditions and adjust traffic signal timing through centralized command and control strategies designed to help both ADOT and other city agencies relieve or minimize congestion.

C. Define ITS Subsystems, Architecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	No
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow

Traffic Management	Roadway	signal control data
Roadway	Traffic Management	signal control status

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
City of Tempe	ADOT	signal timing data	fiber	yes		
City of Tempe	Mesa	signal timing data	fiber	yes		
City of Tempe	Phoenix	signal timing data	fiber	yes		
City of Tempe	Chandler	signal timing data	fiber	yes		

Arterial ITS applications	Relevant Applications (ENTER: Yes or No)	Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm	Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm
1. Traffic Management	Yes	1.6	ATMS01, ATMS03
2. Transit Operations Support	No		
3. Interagency Data Sharing and Control	Yes	1.6	ATMS07
4. Integrated Traveler Information	No		
5. Archived Data Management	No		
6. Incident Management	Yes	1.7	ATMS08
7. Freeway-Arterial	Yes	1.6, 1.7	ATMS04

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$276,832.00	$118,643.00	$395,475.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Feb-2010
Receipt of ADOT project number	Apr-2010	No		NA
Initial DCR	May-2010	No		NA
Final DCR	Jun-2010	No		NA
30% Preliminary Plans, Cost Estimate and Report	Aug-2010	No		NA
60% Preliminary Plans, Cost Estimate and Report	Oct-2010	No		NA
Final Preliminary Plans, Cost Estimate and Report	Dec-2010	No		NA
Environmental Clearance	Oct-2010	No		NA
Utility Clearance	Nov-2010	No		NA
Right-of-Way Clearance	Aug-2010	No		NA

PS&E Approval	Mar-2011	yes	4	Jun-2010
Bid opening	May-2011	Yes	5	Jul-2010
Final Deployment	Nov-2011	yes	13	Mar-2011

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	5
Additional staff resources required for fully utilizing features added by project (FTEs)	0.25
Estimated current annual ITS operations & maintenance budget	$160,000
Estimated additional annual operations & maintenance funds required for features added by project	$8,000
Estimated DATE from when required additional O&M funds will be available	Jul-2010

Other comments:

In the future this increased bandwidth from the fiber will allow for installation of real-time video detection (data gathering) and CCTV monitoring

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).

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Please use one worksheet per project, with the tab at the bottom indicating agency priority

Links to various websites are provided for additional information and help

The worksheet titled "Example" shows an example on how to enter Data in the highlighted areas

The worksheet titled "HELP" shows how to figure out your project's ITS Subsystems & Architecture Flows

Please enter required information in highlighted cells

A. Project Title & Sponsor

Lead Agency	City of Tempe TMP-06
Other Partnering Agencies	n/a
ITS Project Title:	Install CCTV monitoring stations at various locations

B. Project Goals & Objectives

Project Goals:

The Tempe TMC will employ state-of-the-art technologies to manage traffic and transit operations in an increasingly dynamic environment. The center will also serve to inform and advise patrons of real-time travel information including conventional traveler information, Light Rail Transit (LRT), and bus transit schedule adherence information. A key project feature includes monitoring segments of the regional transportation Closed Circuit Television (CCTV) network. This proposed project serves to expand this feature by adding CCTV monitoring capabilities at (25) signalized intersections along the LRT alignment. This expanded CCTV coverage will take full advantage of the communications infrastructure built into the Phoenix East Valley LRT project.

Objectives:

The video monitoring stations will provide direct and immediate access to the local traffic conditions. Accident and incident management will be enhanced by this additional monitoring capability while simultaneously allowing the transportation management staff the ability to monitor private and public transportation vehicles throughout the Tempe segment of this regionally significant transportation facility, maximizing multi-modal coordination and safety operations. Data gathered locally from this CCTV network can be shared between agencies and across jurisdictions including MAG, Valley Metro Rail as well as the cities of Phoenix and Mesa. This project promotes multi-jurisdictional congestion relief goals by providing a platform to better coordinate LRT traffic signals as well as to respond to accidents/incidents in a more cooperative and efficient process.

C. Define ITS Subsystems, Architecture Flows, Communications & Arterial ITS Applications

SELECT ITS Subsystems: http://www.iteris.com/itsarch/html/entity/pa	Yes or No
Center Subsystem	Yes
Traveler Subsystem	Yes
Field/Roadside Subsystem	Yes
Vehicle Subsystem	No
Communications Subsystem	Yes

Architecture Flows (Information flows among four subsystems: Traveler, Center, Roadside and Vehicle Subsystems)

From Subsystem	To Subsystem	Information flow
Traffic Management	Roadway	video surveillance control
Roadway	Traffic Management	traffic images
Traffic Management	Transit Management	road network conditions

Transit Management	Information Service Provider	demand responsive transit request
Traffic Management	Emergency Management	traffic images

Communications: Required communications medium for data sharing with other agencies: (if applicable)

From agency	To agency	data flow	Medium	Existing?	Future (year) mm/yyyy	Check Date with Project Schedule
City of Tempe	Valley Metro	Video Images	LRT Fiber	No	Dec-2008	
City of Tempe	MAG	Video Images	LRT Fiber	No	Dec-2008	
City of Tempe	Phoenix	Video Images	LRT Fiber	No	Dec-2008	
City of Tempe	Mesa	Video Images	LRT Fiber	No	Dec-2008	

Arterial ITS applications	**Relevant Applications (ENTER: Yes or No)**	**Applicable ITS User Services Addressed http://www.iteris.com/itsarch/html/user/userserv.htm**	**Applicable ITS Market Packages http://www.iteris.com/itsarch/html/mp/mpindex.htm**
1. Traffic Management	Yes	1.6	ATMS01, ATMS03

2. Transit Operations Support	Yes	2.4	APTS5
3. Interagency Data Sharing and Control	Yes	1.6	APTS7
4. Integrated Traveler Information	Yes	1.1	ATIS2
5. Archived Data Management	No		
6. Incident Management	Yes	1.7	ATMS08
7. Freeway-Arterial	No		

D. Project Budget

(1) The total of all federal funds requested for ITS projects by any MAG member agency should not exceed $1 million per program year per agency.

(2) Joint projects that involve 3 or more agencies may exceed $1m in federal cost. Federal cost of each agency's component will not be counted against the $1m limit.

(3) There is no limit on the number of projects that may be submitted by an agency, but each project requires the 30 percent local cost match

	Federal Cost	Local Match (min 30%)	Total Cost
Amount	$325,832.00	$139,643.00	$465,475.00
Cost percentage	70.0%	30.0%	

E. Project Schedule

The following project milestones and schedules are based on a typical project procurement process. Please select applicable milestones. Some ITS projects may follow an abbreviated process. ENTER estimated time for such a process

Standard Project Milestones	Default Schedule for Process	Applicable Milestones (ENTER - Yes OR No)	Estimated Time (ENTER #Months)	Estimated Date (Enter> mm/yyyy)
Apply for ADOT project number				Feb-2012
Receipt of ADOT project number	Apr-2012	No		NA
Initial DCR	May-2012	No		NA
Final DCR	Jun-2012	No		NA
30% Preliminary Plans, Cost Estimate and Report	Aug-2012	No		NA
60% Preliminary Plans, Cost Estimate and Report	Oct-2012	No		NA
Final Preliminary Plans, Cost Estimate and Report	Dec-2012	No		NA
Environmental Clearance	Oct-2012	No		NA
Utility Clearance	Nov-2012	No		NA
Right-of-Way Clearance	Aug-2012	No		NA
PS&E Approval	Mar-2013	Yes	4	Jun-2012
Bid opening	May-2013	Yes	5	Jul-2012
Final Deployment	Nov-2013	Yes	13	Mar-2013

F. System Maintenance and Operations

Current staff resources available for ITS operations at the local agency (FTEs)	5
Additional staff resources required for fully utilizing features added by project (FTEs)	0.25
Estimated current annual ITS operations & maintenance budget	$160,000
Estimated additional annual operations & maintenance funds required for features added by project	$16,000
Estimated DATE from when required additional O&M funds will be available	Jul-2012

Other comments:

G. 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 (See Appendix A of Arterial ITS Plan) during the project development process

The project sponsor or lead agency intends to incorporate the Systems Engineering Analysis in the scope of work for the project's Design Concept Report. The Systems Engineering Analysis will be carried out based on the forthcoming guidelines to be provided by FHWA (and made available at the MAG website).