

PART A - CONTACT INFORMATION	
1. Sponsoring Agency	City of Glendale
2. Contact Name	Trevor Ebersole
3. Phone	623-930-2944
4. E-Mail Address	tebersole@glendaleaz.com
5. Mailing Address	6210 West Myrtle Avenue, Ste. 112, Glendale, AZ 85301
(OPTIONAL)	
GIS Submittal Instructions	

PART B - CMAQ Score Data

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

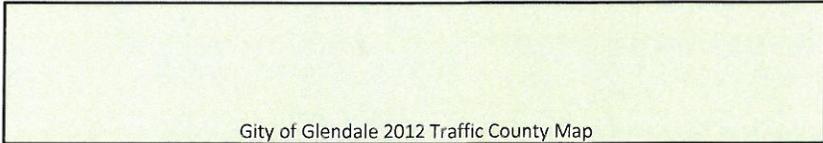
Federal Funding Eligibility

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

1. Traffic Estimate and Roadway Characteristics

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

b. Please Describe how the ADT was estimated:



c. When was the ADT estimate developed:

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

e. Starting Limit of the Roadway Section:

f. Ending Limit of the Roadway Section:

g. Length (Miles)

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

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

2. Improvements in Traffic Management & Operations.

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

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

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

NOTE: All ITS projects MUST involve eligible infrastructure improvements.

3. Other Improvements. Check all that apply:

- Traffic signal system improvements at a single agency
- Traffic signal system improvements that apply to more than one agency

PART B - CMAQ Score Data

- Includes improvements to coordination between arterial and freeway traffic operations
- Project conforms to local land use plans
- Adds features to traffic signals that would better accommodate seniors at pedestrian crossings

4. Traffic Flow Improvement Due to Project (Not required for Traffic Mgmt & Operations Improvements)

- a. Enter the pre-improvement (current) average traffic speed of the corridor:
- b. Enter the post-improvement (current) average traffic speed of the corridor:

PART C1 - ITS Project Information

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

A. Project Title & Sponsor

Lead Agency	City of Glendale
Other Partnering Agencies	
Project Title	Camelback Rd, 51st Ave to 67th Ave
Project Category	Arterial ITS

B. Project Goals & Objectives

Project Goals:
 Real time traffic management and control of all traffic signals within the City of Glendale. This project will tie in Camelback Road to the existing fiber optic system.

Project Objectives:
 The ability to view all roadways and intersections remotely and make informed changes to the signal system to benefit the traveling public during normal and contested traffic conditions.

C. Project Information

Project Location Description - a PDF file of a map must be submitted to MAG as an attachment:
 Camelback from 51st Avenue to 67th Avenue.

Scope of the Project:
 Installation of conduit, fiber optic cable, communications equipment and CCTV cameras at intersections along Camelback to complete several last mile connections to expand the City's remote control and management capabilities of the signal system. Specifically 2 miles of conduit/fiber optics and 2 cameras.

PART C1 - ITS Project Information

D. Identify Project Components in MAG Regional ITS Architecture

Service Area	Addressed in this Project (Yes or No)	Applicable ITS Service Packages http://www.azmag.gov/ITS/
1. Traffic Management	yes	ATMS 01, ATMS 03
2. Public Transportation	no	
3. Communications	no	
4. Traveler Information	no	
5. Archived Data Mgmt.	no	
6. ITS for Safety	no	
7. ITS Planning	no	
8. Fwy-Arterial Operations	no	

NOTE: Insert the relevant Architecture Flow Diagrams in worksheet: Part C-ITSArchFlowDiags

E. Program Year Preference (enter FY2018 oor FY2019)

Preferred program FY FY2018

F. Project Budget

	Federal Cost	Local Match (min 5.7%)	Total Cost
Amount	\$400,000.00	\$24,179.00	\$424,179.00
Cost percentage	94.3%	5.7%	

G. System Maintenance and Operations

Current staff resources available to support ITS operations at the local agency (in FTEs)	5
Additional staff resources required for fully utilizing features added by project (in FTEs)	0
Agency's estimated current annual ITS operations & maintenance (O&M) budget	\$613,532
Estimated additional annual O & M funds required for features added by this project	\$0
Estimated DATE from when required additional local O&M funds will be available	

PART C1 - ITS Project Information

Other comments:

H. Systems Engineering Analysis Requirement

Commitment to address the federal requirement for Systems Engineering Analysis:

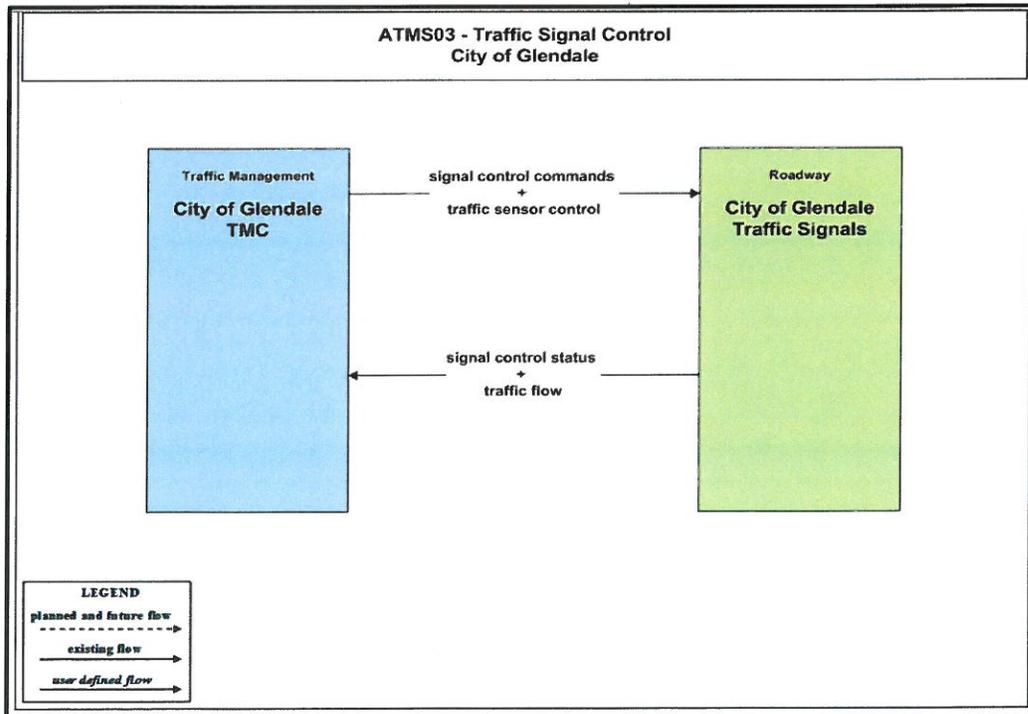
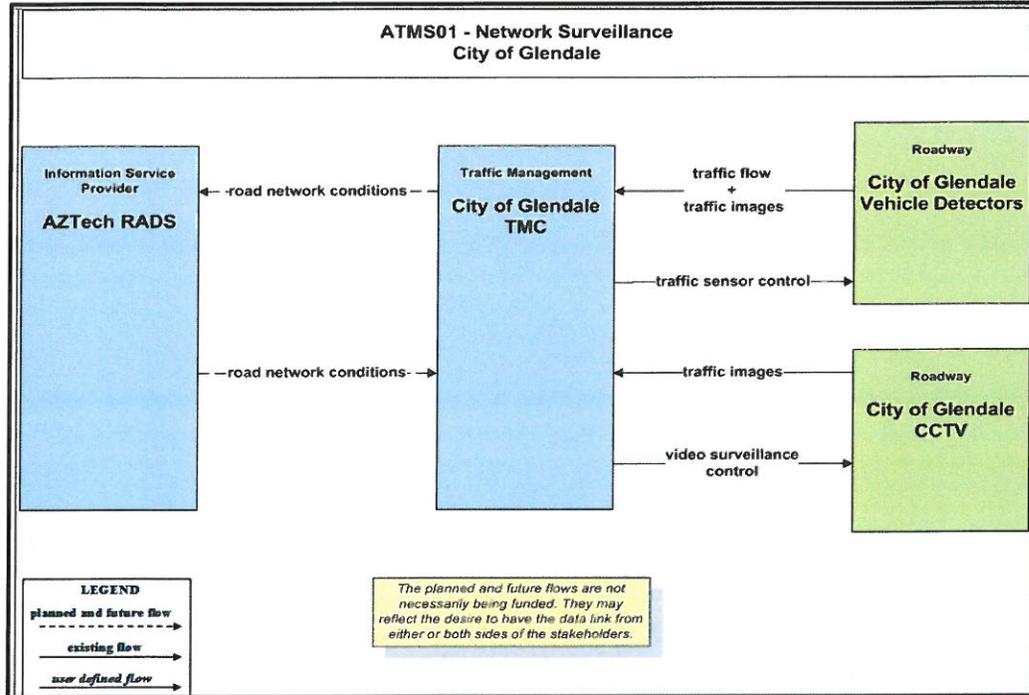
Agency's intent to follow the process described in the 'V' diagram during the project development process

The project sponsor/lead agency City of Glendale intends to incorporate the Systems Engineering Analysis in the scope of work for the projects' Design Concept Report following guidance on the ADOT's System Engineering Checklist provided http://azmaq.gov/Documents/ITS_2010-11-22_ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf

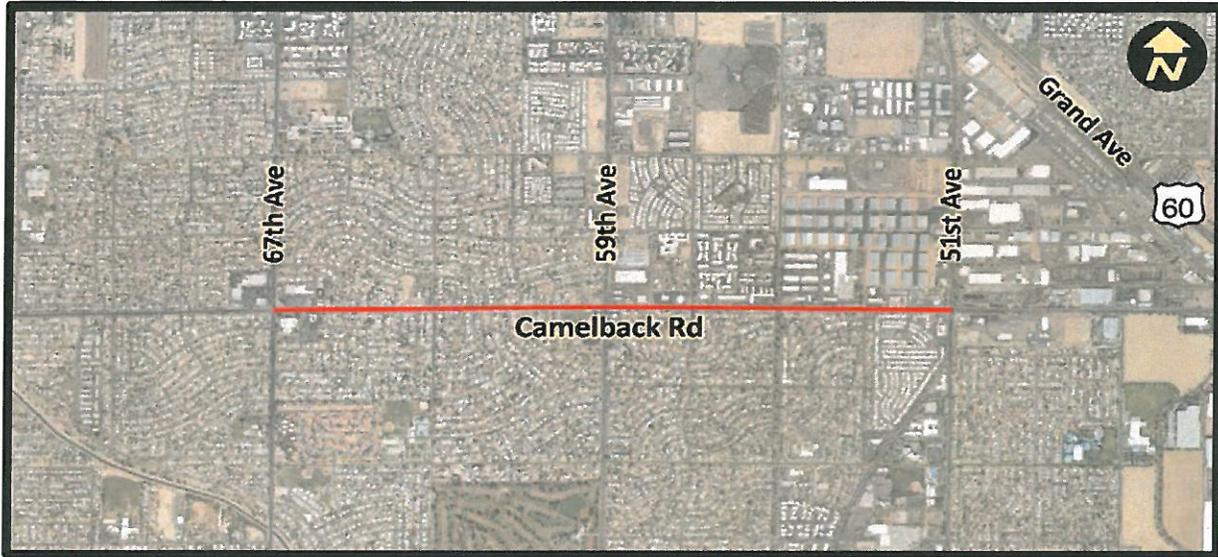
PART C2 - ITS Architecture Flow Diagrams

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

Insert Architecture Flow Diagrams in the space below:



Location Map



Intersection at Camelback and 59th Avenue



Intersection at Camelback and 51st Avenue



PART D1 - Detailed Cost Estimate					
Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
A. SCOPING (15% Preliminary Engineering Design)					
1. SITE TOPOGRAPHIC SURVEY	LS	1		\$0.00	No
2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN	LS	1	\$8,483.56	\$8,483.56	No
3. SYSTEMS ENGINEERING ANALYSIS (must address FHWA requirements)	LS	1	\$30,000.00	\$30,000.00	No
4. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents)	LS	1	\$13,000.00	\$13,000.00	No
5. HAZMAT ASSESSMENT	LS	1	2000	\$2,000.00	No
SUBTOTAL – PROJECT SCOPING COSTS				\$53,483.56	\$0
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E					
Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
1. Right-of-Way Acquisition	LS	1	\$0.00	\$0.00	No
2. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules.	LS	1	\$80,000.00	\$80,000.00	No
3. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report	LS	1	\$0.00	\$0.00	No
4. DRAINAGE REPORT	LS	1	\$0.00	\$0.00	No
5. Storm Water Pollution Prevention Plan (SWPPP)	LS	1	\$0.00	\$0.00	No
SUBTOTAL – PROJECT DESIGN COSTS				\$80,000.00	\$0
C. CONSTRUCTION OR IMPLEMENTATION					
1. CONSTRUCTION ELEMENTS (Insert additional rows if necessary)					
Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
Fiber	LF	10,560	\$5	\$52,800	Yes
Pull Box #7	EA	10	\$500	\$5,000	Yes
Directional Bore	LF	10,560	\$30	\$316,800	Yes
Cameras	EA	2	\$10,000	\$20,000	Yes
					Yes
					Yes
					Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
SUBTOTAL - CONSTRUCTION				\$394,600	\$394,600

PART D1 - Detailed Cost Estimate

2. PROCUREMENT (Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
<i>Example: ATMS Server Software</i>	LS			\$0	No
<i>Example: TMC Workstations</i>	LS			\$0	No
<i>Example: VIDS, 3 approaches</i>	EA			\$0	Yes
<i>Example: VIDS, 4 approaches</i>	EA			\$0	Yes
<i>Example: CCTV (IP w/ pan/zoom/tilt)</i>	EA			\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
SUBTOTAL – PROCURMENT				\$0	\$0

3. OTHER ITEMS (Insert additional rows if necessary)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
				\$0.00	Yes
				\$0.00	Yes
				\$0.00	Yes
				\$0.00	Yes
				\$0.00	Yes
				\$0.00	Yes
				\$0.00	Yes
				\$0.00	Yes
				\$0.00	Yes
				\$0.00	Yes
SUBTOTAL - OTHER CONSTRUCTION LINE ITEMS				\$0.00	\$0

4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only. If Section 1 is filled out, please fill out this section)

Item Description	Unit	Quant.	Unit Prices	Total	Eligible for CMAQ?
CONTRACTOR MOBILIZATION	LS	1	\$19,730.00	\$19,730.00	Yes
TRAFFIC CONTROL	LS	1	\$19,730.00	\$19,730.00	Yes
CONSTRUCTION SURVEY & LAYOUT	LS	1	\$7,892.00	\$7,892.00	Yes
CONSTRUCTION CONTINGENCIES	LS	1	\$19,730.00	\$19,730.00	Yes
CONSTRUCTION ADMINISTRATION	LS	1	\$39,460.00	\$39,460.00	Yes
SUBTOTAL – MOBILIZATION & ADMINISTRATION COSTS				\$ 106,542	\$106,542
TOTAL CONSTRUCTION OR IMPLEMENTATION COST				\$ 501,142	\$ 501,142

PART D1 - Detailed Cost Estimate					
D. ADOT Fee for PE Reviews and Staff Charges	LS	1	\$30,000	\$30,000	No
TOTAL ADOT Fee COST				\$30,000	\$0
E. TOTAL PROJECT COST				\$664,626	\$501,142
F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS					
TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION					\$664,626
TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$424,000
TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)					\$399,832
LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)					\$24,168
LOCAL AGENCY FUNDS <u>NOT</u> ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$240,626

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

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

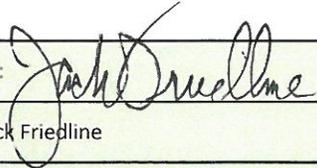
Section 1 - Total Project Budget

Cost Estimate for the Project from Part D1	Eligible Federal Cost	Local Cost Only	Total Cost	(Optional) Additional Notes
A. SCOPING (15% Preliminary Engineering Design) (Non-infrastructure projects: Only #2 applies).	\$ -	\$ 53,484	\$ 53,484	
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E (Not applicable to non-infrastructure projects)	\$ -	\$ 80,000	\$ 80,000	
C. CONSTRUCTION OR IMPLEMENTATION				
1. CONSTRUCTION ELEMENTS	\$ 394,600	\$ -	\$ 394,600	
2. PROCUREMENT	\$ -	\$ -	\$ -	
3. OTHER ITEMS	\$ -	\$ -	\$ -	
4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only)	\$ 106,542	\$ -	\$ 106,542	
SUBTOTAL	\$ 501,142	\$ -	\$ 501,142	
D. ADOT Fee for PE Reviews and Staff Charges	\$ -	\$ -	\$ 30,000	
Total Project Cost	\$ 501,142	\$ 133,484	\$ 664,626	

Agency Programming

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

Requested MAG TIP Programming	Short Work Description (E.g. Construct HAWK)	Year (Choose One)	Local Cost	CMAQ Cost	Total Cost	Local Share
1. Scoping and PE (Optional)	Preliminary design	2017	\$ 133,484	\$ -	\$ 133,484	100%
2. Other (Optional)	ADOT Review Fee	2017	\$ 30,000	\$ -	\$ 30,000	100%
3. Other (Optional)				\$ -	\$ -	
4. Construction or Implementation	Tie in to existing fiber optic	2018	\$ 101,310	\$ 399,832	\$ 501,142	20%
Totals			\$ 264,794	\$ 399,832	\$ 664,626	40%

PART E - SIGNATURE AND CHECKLIST	
As the jurisdiction's manager/administrator or designated representative, I certify that this application is accurate and complete and that the project will be included in the sponsoring MAG member agency's local CIP/TIP if the project is selected for federal funding.	
Signature:	
Name:	Jack Friedline
Title:	Public Works Director
Date:	09-17-2015
Checklist - OPTIONAL	
This check list is optional, but is included to facilitate applicant review and verification that all required fields in the form have been completed.	
PART A - Contacts	Complete?
Contact Information, fields 1 – 5 are complete	Yes
PART B - TIP Listing and CMAQ Score Data	Complete?
1. Traffic Estimate and Roadway Characteristics - Fields a - i are completed	Yes
2. Improvements in Traffic Management & Operations	Yes
3. Other Improvements - As applicable all fields are completed	Yes
4. Traffic Flow Improvement Due to Project	No
PART C1 - ITS Project Information	Complete?
Section A is Complete	Yes
Section B is Complete	Yes
Section C is Complete & A PDF file of map will be attached to the submittal to MAG	Yes
Section D is Complete & All relevant Architecture Flow Diagrams have been inserted in the worksheet	Yes
Section E is Complete	Yes
Section F is Complete	Yes
Section G is Complete	Yes
Section H is Complete	Yes
PART C2 - ITS Architecture Flow Diagrams have been inserted	Yes
PART D1 - Detailed Cost Estimate	Yes
PART D2 - TOTAL PROJECT BUDGET AND TIP PROGRAMMING	Yes
PART E - Signature & Checklist	Complete?

PART E - SIGNATURE AND CHECKLIST	
Form is signed	Yes
Name, title and date fields are completed.	Yes