

PART A - CONTACT INFORMATION	
1. Sponsoring Agency	City of Maricopa
2. Contact Name	Rob Dolson
3. Phone	520 316-6936
4. E-Mail Address	rob.dolson@maricopa-az.gov
5. Mailing Address	39700 W. Civic Center Plaza, Maricopa, AZ 85138
(OPTIONAL)	
GIS Submittal Instructions	

PART B - CMAQ Score Data																									
<p>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</p>																									
Federal Funding Eligibility																									
<p>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.</p>																									
1. Traffic Estimate and Roadway Characteristics																									
a. Current Average Daily Traffic (ADT) on the Facility or the Nearest Parallel Facility of a Similar Type:	14579 (SR 347), 9417 (Honeycutt)																								
b. Please Describe how the ADT was estimated:	Counts were 24 hour tube counts taken in March 2012 by Field Data Services. Counts along SR 347 were just north of Honeycutt. Counts for Honeycutt were east of SR 347. For reference, counts along SR 347 one mile north of Honeycutt (was 39474.																								
c. When was the ADT estimate developed:	2012																								
d. Name of the Roadway Section Used for the ADT Estimate:	Honeycutt Road, east of SR 347																								
e. Starting Limit of the Roadway Section:	SR 347																								
f. Ending Limit of the Roadway Section:	White and Parker Road																								
g. Length (Miles)	3.0 miles																								
h. Total Number of Through Lanes on the Roadway Section:	4																								
i. Federal Functional Classification of the Roadway Section:	Minor Arterial																								
	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:	30																								
b. In the Table Check the Box in The Row That Best Describes the Project (Check Only One Box):																									
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 40%;">Before (Pre-Improvement) Condition</th> <th style="width: 30%;">After (Post Improvement) Condition</th> <th style="width: 20%;">Expected Increase In Speed</th> </tr> </thead> <tbody> <tr> <td></td> <td>Interconnected, pre-timed signals with old timing plan</td> <td>Advanced computer-based control</td> <td>17.5 percent</td> </tr> <tr> <td style="text-align: center;">X</td> <td>Non-interconnected signals with traffic-actuated controllers</td> <td>Advanced computer-based control</td> <td>16.0 percent</td> </tr> <tr> <td></td> <td>Interconnected, pre-timed signals with actively managed timing</td> <td>Advanced computer-based control</td> <td>8.0 percent</td> </tr> <tr> <td></td> <td>Interconnected, pre-timed signals with various forms of master control and various qualities of timing plans</td> <td>Optimization of signal timing plans. No change in hardware</td> <td>12.0 percent</td> </tr> <tr> <td></td> <td>Non-interconnected, pre-timed signals with old timing plan</td> <td>Optimization of Signal Timing Plans</td> <td>7.5 percent</td> </tr> </tbody> </table>			Before (Pre-Improvement) Condition	After (Post Improvement) Condition	Expected Increase In Speed		Interconnected, pre-timed signals with old timing plan	Advanced computer-based control	17.5 percent	X	Non-interconnected signals with traffic-actuated controllers	Advanced computer-based control	16.0 percent		Interconnected, pre-timed signals with actively managed timing	Advanced computer-based control	8.0 percent		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		Non-interconnected, pre-timed signals with old timing plan	Optimization of Signal Timing Plans	7.5 percent
	Before (Pre-Improvement) Condition	After (Post Improvement) Condition	Expected Increase In Speed																						
	Interconnected, pre-timed signals with old timing plan	Advanced computer-based control	17.5 percent																						
X	Non-interconnected signals with traffic-actuated controllers	Advanced computer-based control	16.0 percent																						
	Interconnected, pre-timed signals with actively managed timing	Advanced computer-based control	8.0 percent																						
	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																						
	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:																									
<p><input checked="" type="checkbox"/> Traffic signal system improvements at a single agency</p> <p><input type="checkbox"/> Traffic signal system improvements that apply to more than one agency</p> <p><input type="checkbox"/> Includes improvements to coordination between arterial and freeway traffic operations</p> <p><input checked="" type="checkbox"/> Project conforms to local land use plans</p> <p><input type="checkbox"/> Adds features to traffic signals that would better accommodate seniors at pedestrian crossings</p>																									
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:	30																								
b. Enter the post-improvement (current) average traffic speed of the corridor:	35																								

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

Arterial ITS ▼

A. Project Title & Sponsor

Lead Agency	City of Maricopa
Other Partnering Agencies	
Project Title	Honeycutt Road from SR 347 to White & Parker & White and Parker from Honeycutt to City Hall
Project Category	Arterial ITS

B. Project Goals & Objectives

Project Goals:
 This is the first ITS project planned by the City of Maricopa. The goal of this project is to provide a fiber backbone between City Hall on White and Parker Blvd and SR 347, which is the busiest corridor within Maricopa. Currently the traffic signals along SR 347 are ADOT facilities and operated by Tucson Regional Traffic. The signals are interconnected via wireless communications. The City desires to take over local control of the signals along SR 347 in the future, and desires to complete a fiber connection to SR 347 with this project to facilitate that transition to local control in the future.

Project Objectives:
 The City will interconnect 3 traffic signals along Honeycutt, install CCTV's at each of the 3 signalized intersections, and make wireless connections to 3 additional traffic signals along Smith Enke-Road, which is one mile north of Honeycutt. The Honeycutt corridor has one mile of existing empty conduit which will be utilized by this project. This project will allow Maricopa to view traffic conditions along Honeycutt in real time, adjust signal timing, and reduce non-planned maintenance call response time by monitoring the condition of the traffic signals. The project will improve regional interconnectivity by allowing Maricopa to have local control over the traffic signals along SR 347, a major commuter route between Maricopa and Phoenix.

C. Project Information

Project Location Description - a PDF file of a map must be submitted to MAG as an attachment:
 Honeycutt Road from SR 347 to White and Parker Road, then continue south along White and Parker Road to the City of Maricopa City Hall. Project includes a 500' connection along SR 347 between Honeycutt and Maricopa Casa Grande Highway traffic signal.

Scope of the Project:
 The project will install 1-3 inch conduit with innerduct, trunk fiber, interconnect 3 traffic signals along the conduit path, install 3 CCTV cameras at the traffic signals, and install wireless radio connections to 3 additional traffic signals on Smith-Enke Road, one mile to the north. By making the fiber connection to the traffic signal at SR 347 and Maricopa Casa Grande Highway, just south of Honeycutt, the City will have a dedicated fiber link between their facilities at City Hall and the ADOT signals along SR 347. The project is included in the City of Maricopa Regional Transportation Plan Update.

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	Yes	
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

F. Project Budget

	Federal Cost	Local Match (min 5.7%)	Total Cost
Amount	\$400,000.00	\$75,920.00	\$475,920.00
Cost percentage	84.0%	16.0%	

G. System Maintenance and Operations

Current staff resources available to support ITS operations at the local agency (in FTEs)	1
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	\$10,000
Estimated additional annual O & M funds required for features added by this project	\$5,000
Estimated DATE from when required additional local O&M funds will be available	Jul-2017

PART C1 - ITS Project Information

Other comments:

City of Maricopa is requesting \$400,000 in CMAQ funding to comply with MAG request for maximum CMAQ funding levels, even though federal eligible project costs per Tab D1 exceeds \$400,000. The excess amount will be locally funded unless close out funds become available for FY 2018 construction projects.

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 City of Maricopa intends to incorporate the Systems Engineering Analysis in the Scope of Work for the Project Assessment Report.

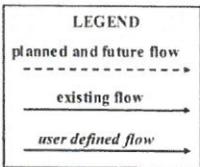
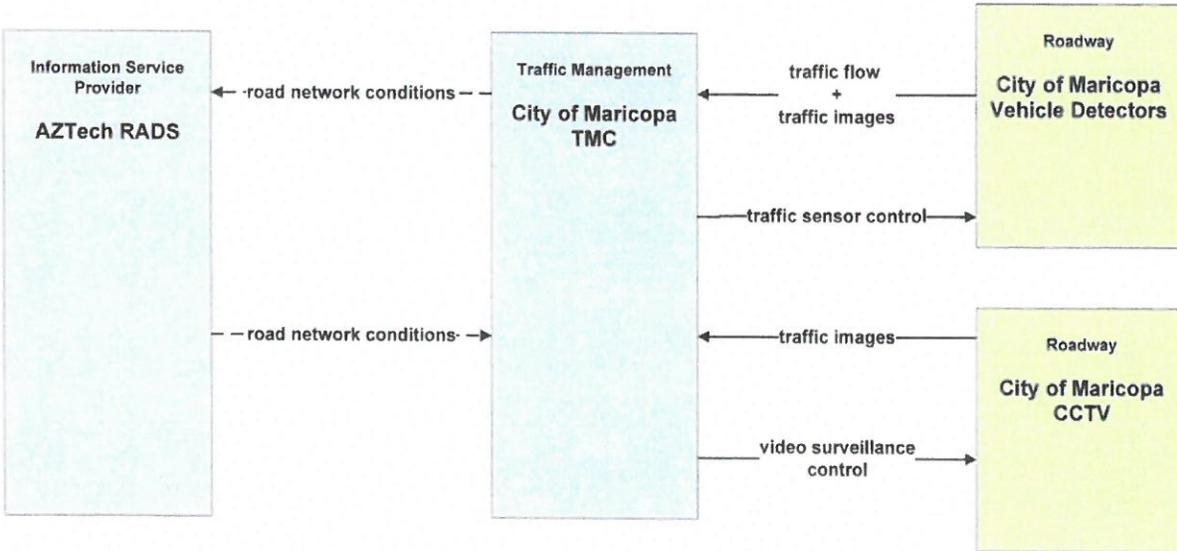
http://azmag.gov/Documents/ITS_2010-11-22_ITS-Systems-Engineering-and-Architecture-Compliance-Checklist.pdf

PART C2 - ITS Architecture Flow Diagrams

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

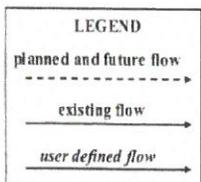
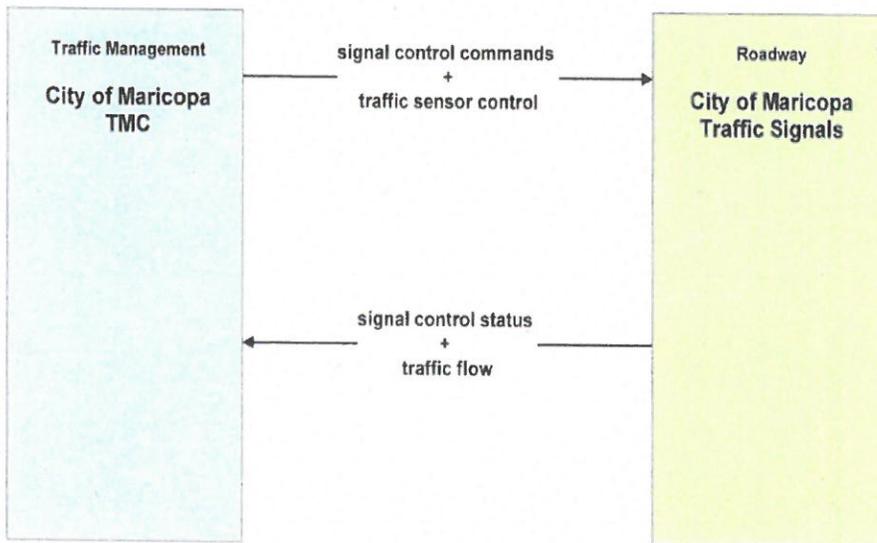
Insert Architecture Flow Diagrams in the space below:

**ATMS01 - Network Surveillance
City of Maricopa**



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

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



ADOT Review Fees for Certification Accepted Agencies/1

ADOT SECTION	FUNCTION	RATE	HOURS	CHARGE/2
Environmental Planning	Environmental Planning	\$ 50	100	\$ 5,000
Urban Project Management	Project Manager	\$ 60	60	\$ 3,600
Urban Project Management	Project Coordinator	\$ 60	20	\$ 1,200
SUBTOTAL			180	\$ 9,800
STAFF GRAND TOTAL				\$ 10,000

ADOT Review Fees for Non Certification Accepted Agencies/1

ADOT SECTION	FUNCTION	RATE	HOURS	CHARGE/2
Contracts and Specs	Contracts and Specs	\$ 60	200	\$ 12,000
District	District	\$ 55	18	\$ 990
Engineering Consulting Section	Engineering Consulting Section	\$ 40	24	\$ 960
Environmental Planning	Environmental Planning	\$ 50	100	\$ 5,000
Materials	Geotech Design	\$ 50	15	\$ 750
Materials	Geotech Field Investigation	\$ 50	5	\$ 250
Right of Way	Plans	\$ 50	40	\$ 2,000
Roadway Group	Roadway Design	\$ 55	40	\$ 2,200
Roadway Group	Roadway Review	\$ 70	5	\$ 350
Traffic	Traffic Design	\$ 55	45	\$ 2,475
Urban Project Management	Project Manager	\$ 60	40	\$ 2,400
Urban Project Management	Project Coordinator	\$ 60	10	\$ 600
SUBTOTAL			542	\$ 29,975
STAFF GRAND TOTAL				\$ 30,000

Notes:

1. Based on material provided by ADOT in July, 2015. All functions, rates, hours and costs are as listed in the material provided by ADOT. Items
2. Charges to agencies will be based on work performed by ADOT. Costs accrued will vary depending on project characteristics and may be

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	\$0.00	No
2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN	LS	1	\$10,000.00	\$10,000.00	No
3. SYSTEMS ENGINEERING ANALYSIS (must address FHWA requirements)	LS	1	\$3,000.00	\$3,000.00	No
4. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents)	LS	1	\$17,000.00	\$17,000.00	No
5. HAZMAT ASSESSMENT	LS	1	\$0.00	\$0.00	No
SUBTOTAL - PROJECT SCOPING COSTS				\$30,000.00	\$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?
1-3" Conduit - trenched	LF	15,000	\$10	\$150,000	Yes
1-3" Conduit - directional drilled	LF	1,430	\$15	\$21,450	Yes
1-3" Conduit - Rigid Metal bridge attachment	LF	320	\$20	\$6,400	Yes
1-1" Innerduct	LF	22,220	\$1	\$22,220	Yes
No. 7 Pullboxes	EA	8	\$600	\$4,800	Yes
Communications Splice Vaults	EA	12	\$4,000	\$48,000	Yes
Fiber Optic Splice Closure	EA	4	\$3,000	\$12,000	Yes
SMFO 96	LF	22,220	\$2.50	\$55,550	Yes
SMFO 12	LF	400	\$2	\$800	Yes
CCTV Cameras with PTZ	EA	3	\$5,000	\$15,000	Yes
Ethernet Switches (field)	EA	4	\$2,000	\$8,000	Yes
Ethernet Switch (central)	EA	1	\$5,000	\$5,000	Yes
Wireless Communications Radios	EA	4	\$2,500	\$10,000	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
				\$0	Yes
SUBTOTAL - CONSTRUCTION				\$359,220	\$359,220

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				\$615,920	\$475,920
F. SUMMARY OF FEDERAL AND NON-FEDERAL FUNDS					
TOTAL COST FOR PROJECT CONSTRUCTION/IMPLEMENTATION					\$615,920
TOTAL COST FOR PROJECT ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$475,920
TOTAL FEDERAL FUNDS @ 94.3% (.943 x Total Eligible Cost shown highlighted above)					\$448,793
LOCAL AGENCY MATCHING FUNDS (.057 x Total Cost shown highlighted above)					\$27,127
LOCAL AGENCY FUNDS <u>NOT</u> ELIGIBLE FOR FEDERAL REIMBURSEMENT					\$140,000

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

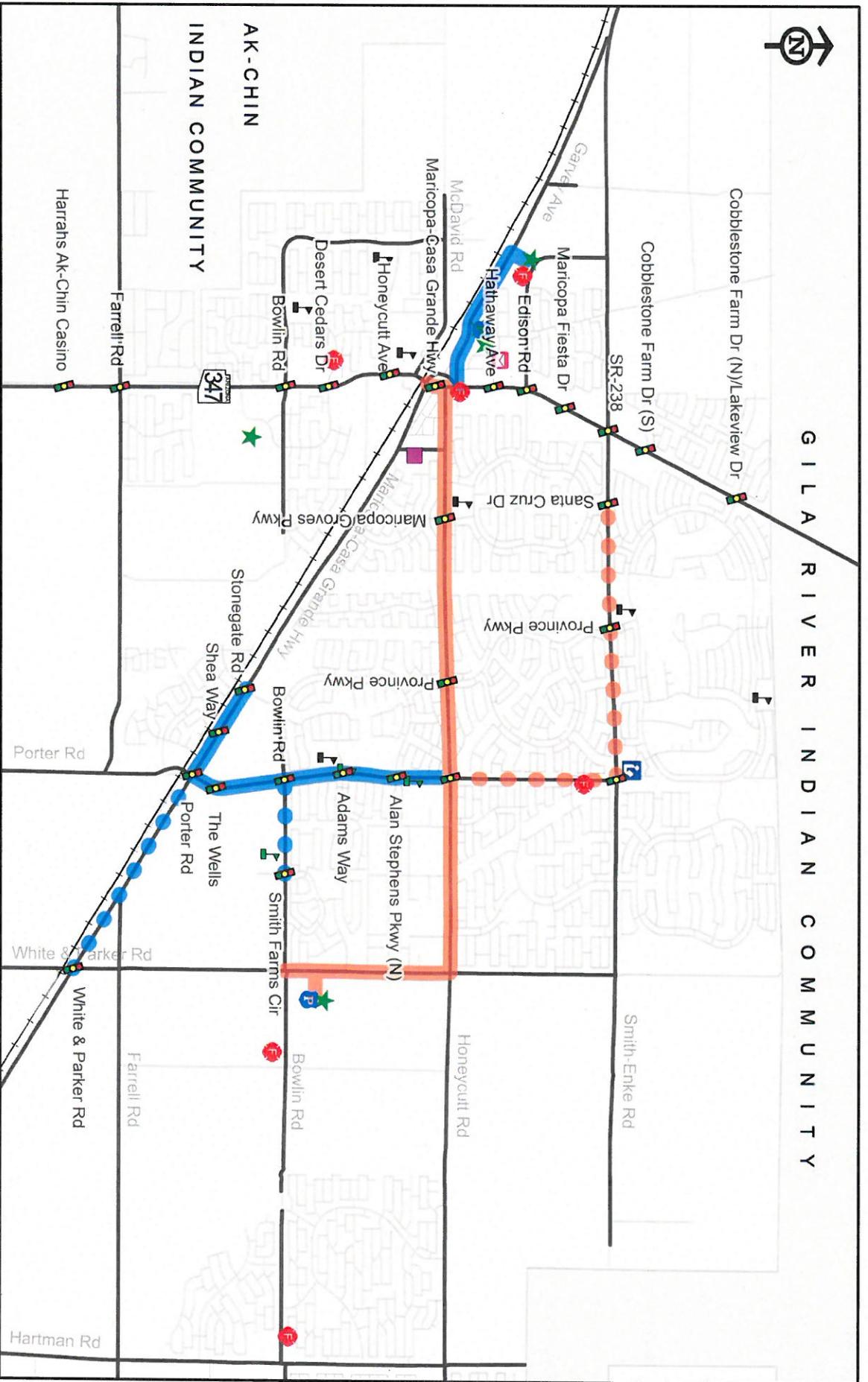
Cost Estimate for the Project from Part D1	Eligible Federal Cost	Local Cost Only	Total Cost	(Optional) Additional Notes
A. SCOPING (15% Preliminary Engineering Design) (Non-infrastructure projects: Only #2 applies).	\$ -	\$ 30,000	\$ 30,000	
B. FINAL PRELIMINARY ENGINEERING DESIGN - Stages II, III, IV and PS&E (Not applicable to non-infrastructure projects)	\$ -	\$ 80,000	\$ 80,000	
C. CONSTRUCTION OR IMPLEMENTATION				
1. CONSTRUCTION ELEMENTS	\$ 359,220	\$ -	\$ 359,220	
2. PROCUREMENT	\$ -	\$ -	\$ -	
3. OTHER ITEMS	\$ -	\$ -	\$ -	
4. MOBILIZATION AND ADMINISTRATION COSTS (Construction Only)	\$ 116,700	\$ -	\$ 116,700	City of Maricopa is requesting \$400,000 in CMAQ funding to comply with MAG request for maximum CMAQ funding levels, even though federal eligible project costs per Tab D1 exceeds \$400,000. The excess amount will be locally funded unless close out funds become available for FY 2018 construction projects.
SUBTOTAL	\$ 475,920	\$ -	\$ 475,920	
D. ADOT Fee for PE Reviews and Staff Charges	\$ -	\$ -	\$ 30,000	
Total Project Cost	\$ 475,920	\$ 110,000	\$ 615,920	

Agency Programming

Please describe the programming of the project in the agency's own CIP/TIP.	City of Maricopa is presently undergoing a TMP update as part of their Area Transportation Plan Update. Projects will be reprogrammed in the TIP starting for FY 2017 and following years during this next TIP process for the City. Project will be added to TIP if approved for CMAQ funding.
---	---

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)	Project Scoping and Final Design	2017	\$ 110,000	\$ -	\$ 110,000	100%
2. Other (Optional)	ADOT Review Fee	2017	\$ 30,000	\$ -	\$ 30,000	100%
3. Other (Optional)				\$ -	\$ -	
4. Construction or Implementation		2018	\$ 75,920	\$ 400,000	\$ 475,920	16%
Totals			\$ 215,920	\$ 400,000	\$ 615,920	35%

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:	William Fay
Title:	Public Works Director - City Engineer
Date:	9-17-15
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	Yes
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?
Form is signed	Yes
Name, title and date fields are completed.	Yes



Legend

- Signals
- Charter School
- District School
- District School Office
- Fire Department
- Library
- Police
- Municipal Buildings
- Post Office
- Railroad
- ITS Fiber Projects**
- Honeycutt Rd (FY 2018)
- Porter Rd/MCGH/Garvey Ave (FY 2019)
- Wireless Connections (FY 2018)
- Wireless Connections (FY 2019)

