

Contact Information	
1. Lead Agency	Maricopa County
2. Contact Name	Faisal Saleem
3. Phone	602-506-1241
4. E-Mail Address	faisal.saleem@maricopa.gov
5. Mailing Address	2901 W. Durango Street Phoenix, AZ 85009

CMAQ 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 facility type:	<input style="width: 100%;" type="text" value="236,300"/>
b. Please describe how the ADT was estimated:	RADS is a regional software tool that is used by agencies throughout the MAG planning area to support local traffic management and operations. The project is not targeting specific facilities, but the most highly traveled arterial roadways within the region will likely be impacted at a greater scale than less traveled roadways, as RADS data and tools will be used more frequently by agencies for operating these significant roadways. A sample of roadways was used by calculating the sum of the average ADTs for the highest traveled portions of arterial roadways throughout the region, per 2018 ADT from the MAG TDMS, although the project can have benefits to most signalized roadways within the region.
c. When was the ADT estimate developed:	<input style="width: 100%;" type="text" value="Estimated in 2019 using 2018 ADT data from MAG TDMS"/>
d. Name of the roadway section used for the ADT estimate:	Bell Road (Grand Ave to I-17), Scottsdale Road (Loop 101 to Shea Blvd), Indian School (51st Ave to SR 51); Baseline Road (Rural Rd to Central Ave); Val Vista Dr (US 60 to Williams Field Rd), MC-85/Buckeye Rd (51st Ave to I-17)
e. Starting limit of the roadway section:	<input style="width: 100%;" type="text" value="see above"/>
f. Ending limit of the roadway section:	<input style="width: 100%;" type="text" value="See above"/>
g. Length (miles):	<input style="width: 100%;" type="text" value="36.4"/>
h. Total number of through lanes on the roadway section:	<input style="width: 100%;" type="text" value="6"/>
i. Federal Functional Classification of the roadway section:	<input style="width: 100%;" type="text" value="Principal Arterial - Other"/> Link to ADOT Functional Classification Maps

CMAQ Data

2. Improvements in Traffic Management & Operations

a. Enter the pre-improvement (current) average corridor traffic speed: 26

b. In the table, check the box that best describes the project (Check only one box):

	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
	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
X	Interconnected, pre-timed signals with various forms of master control and various qualities of	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)

- Traffic signal system improvements at a single agency
- Traffic signal system improvements that apply to more than one agency
- 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: (populated from #2a) 26

b. Enter the post-improvement average traffic speed of the corridor: 29

ITS Project Information

Enter information in highlighted cells ONLY. Links to various websites are provided for additional information and help.

1. Project Title & Sponsor

a. Project Title	Regional Archived Data System (RADS) Core Re-Architect
b. Lead Agency	Maricopa County Department of Transportation
c. Other Partnering Agencies	ADOT and all local agencies in the Maricopa County region

2. Project Type

Prioritize SMO Buckets for the funding application

First Priority	Bucket #1 – ICM Corridors
Second Priority	Bucket #2 – Regional Priority Arterials
Third Priority	Bucket #3 – Local Priority Corridors

3. Project Goals & Objectives

a. Project Goals

This Core Re-Architect project will modernize, optimize, and expand RADS functionality and provide more reliable equipment and organizational architecture to support the current RADS functions and expansion of functions as the region moves towards more advanced operational strategies, including ICM. The project will also implement a data analytics dashboard. RADS acquires, processes, and fuses ITS operations data from multiple agency and disciplinary sources in support of MAG planning functions, traffic operations, incident management, and traveler information. RADS has integrated a wide range of data including FMS, arterial speed, incidents and construction events, emergency response (fire, police) Computer-Aided Dispatch (CAD) data, traffic signal timing status information, traffic signal performance data, and third-party detection data.

While there has been investment in RADS-related hardware, data fusing, and integration efforts over time, the core software has not received the same level of investment, and is thus functioning off of 15 to 20 year old software technology and outdated standards. This is limiting the ability of RADS to support real-time operational needs identified by RADS users, such as the computation and use of real-time operational performance measures, data analytics, regional integration of new kinds of data (such as Anonymous Wireless Address Matching (AWAM)), and future decision-support functions.

There is also a need to improve the data messaging and communications technologies within RADS to provide secure center-to-center and end-to-end communications. This will enhance users ability to provide new data sources and access the archived information securely, efficiently, and without need for technical personnel intervention. This will effectively support time-based retrieval of central repository information, which could include real-time, near-time (zero to ninety days), aggregated, fused and long-term (several years) archived data. This will enable RADS to monitor the operational status of these devices, and send out appropriate notifications, thereby improving the possibility that necessary devices will be operational when a regional incident requiring multi-jurisdictional cooperation occurs.

b. Project Objectives

Re-architect an upgraded RADS structure and migrate RADS database and software

ITS Project Information

functions to a virtualized environment to support optimized and expanded user-identified ICM functions (such as real-time signal performance measures, decision support, automated performance reporting) and to expand data sources such as AWAM, new ADOT FMS data, third party traffic data, construction data, arterial CCTV integration, and others. Leverage the diverse data sources to implement the analytical dashboard.

The objective for RADS is to continue to create value for the region by archiving real-time data for historical, planning and operational purpose. For example, FMS detector station and ramp meter data is invaluable for post-incident analysis across jurisdictional boundaries; archiving AWAM traffic data from roadside sensors allows RADS to provide real-time and historical information for traffic management, traveler information, and planning systems; and the advancement and expected implementation of Connected Vehicles in support of safer and more efficient roadways creates a need to receive, archive, and process critical road condition, work zone, and traffic signal information in coordination with real-time vehicles. The need for greater RADS capacity and analytical dashboard grows with the additional deployments of transportation systems and strategies regionally.

4. Project Information

a. Project location description

The initial target facilities for this project are those identified for ICM, including freeway and parallel arterials; however, RADS is a regional system utilizing regional servers located at the ADOT Traffic Operations Center and MCDOT Traffic Management Center that is used by agencies throughout the MAG region to support local traffic management and operations. Improvements to RADS will impact all facilities owned by transportation agencies who are currently connected to the system or intend to connect to the system in the future.

Note: a PDF file of a map must be submitted to MAG as an attachment.

b. Scope of the project

Develop and document architectural pathway for software migration needs. Develop modernized and upgraded core software to meet current standards. Implement an analytics dashboard utilizing the diverse and multi-agency data. Provide virtualized environments (Microsoft SQL Server) and reprogram processes on virtualized servers located at the MCDOT Traffic Management Center. Add non-relational database capability to accommodate massive quantities of unstructured data sources, such as those provided by raw AWAM data collections, traffic control plans, connected vehicle and work zone data. This project will include optimizing the location of database functions based on the virtualized environment.

After software upgrades are installed, data connections will be established and user data interface will be developed to improve the ability for users to review, maintain and update accurate inventories of their ITS assets. Currently RADS contains read-only, GIS-based inventories of traffic signals, cameras and other ITS assets as they are integrated into the AZTech Regional Information System. The upgraded user interface will allow partners to update their own inventories as new assets are added.

ITS Project Information

5. Identify Project Components in MAG Regional ITS Architecture

Service Area	Addressed in this Project? <small>(Dropdown: Y/N)</small>	Applicable ITS Service Packages
Traffic Management	Yes	ATMS07
Maintenance and Construction	Yes	MC10
Public Transportation	Yes	ATMS02
Traveler Information	Yes	AD2
Emergency Management	Yes	ATMS08
Archived Data Management	Yes	AD2

NOTE: Insert the relevant ITS Architecture flow diagram in the "ITS Architecture" worksheet.

6. Quantitative Criteria

Enter Quantitative Criteria for Bucket(s) selected in Section 2 "Project Type"

Average Daily Traffic (ADT) from 'CMAQ Data' tab in this funding application.	236,300
Crashes Per Mile Per Year (MAG Will Complete)	
Maximum Peak Period Travel Time Index (MAG Will Complete)	
Percentage network communication connectivity to traffic signals & ITS devices.	100%
Regional Priority Corridor Ranking (Enter shares of work in "Regional Priority - Top 100")	40.6
Latest year of your agency's Operations/Management Center upgrade.	2018

7. Program Year Preference

Preferred Program Year

2020

ITS Project Information

8. Project Budget by SMO Strategy

Strategies for Bucket #1 – ICM Corridors	Federal Cost	Local Match (min 5.7%)	Total Cost	Share of Total Project
2-Real-time CCTV monitoring capabilities at all major-major arterial intersections on ICM corridors				0%
3-Vehicle and pedestrian actuated detection at all signalized intersections to support signal operations and real-time collection of data collection, including data on turning movement counts				0%
11-Regional Asset Upgrade/Replace Program - ICM Corridors & Priority Arterials	\$ 1,414,500.00			100%
Total	\$ 1,414,500.00	\$ 85,500.00	\$ 1,500,000.00	100%
Cost Percentage	94.3%	5.7%		
Strategies for Bucket #2 – Regional Priority Arterials	Federal Cost	Local Match (min 5.7%)	Total Cost	Share of Total Project
8-Real-time visual monitoring capability at all major-major intersections on Priority Arterials				0%
9-Additional detection at signalized intersections for real-time collection of data, including turning movement counts stored by individual agencies and archived in RADS				0%
10-Reliable communications between TMCs and major-major intersections to facilitate remote management of traffic operations - Adds both fiber and wireless infrastructure				0%
11-Regional Asset Upgrade/Replace Program - ICM Corridors & Priority Arterials	\$ 1,414,500.00			100%
Total	\$ 1,414,500.00	\$ 85,500.00	\$ 1,500,000.00	100%
Cost Percentage	94.3%	5.7%		
Strategies for Bucket #3 – Local Priority Corridors	Federal Cost	Local Match (min 5.7%)	Total Cost	Share of Total Project
12-Local priority ITS projects	\$ 1,414,500.00			100%
Total	\$ 1,414,500.00	\$ 85,500.00	\$ 1,500,000.00	100%
Cost Percentage	94.3%	5.7%		

ITS Project Information

9. System Maintenance and Operations

a. Current staff resources available to support ITS operations at the local agency (in FTEs)	8
b. Additional staff resources required for fully utilizing features added by project (in FTEs)	0
c. Agency's estimated current annual ITS operations & maintenance (O & M) budget	\$2,000,000
d. Estimated additional annual O & M funds required for features added by this project	\$0
e. Estimated DATE from when required additional local O & M funds will be available	N/A
f. Other comments	Upgrade of equipment will be incorporated into the County's existing annual operations and maintenance budget with no new staffing anticipated. Local agencies who provide data to RADS are responsible for the management of their data and their connection to RADS.

10. 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.

[ADOT Systems Engineering Checklist](#)

The project sponsor/lead agency of this application intends to incorporate the Systems Engineering Analysis in the project's scope of work, following guidance on the ADOT's System Engineering Checklist.

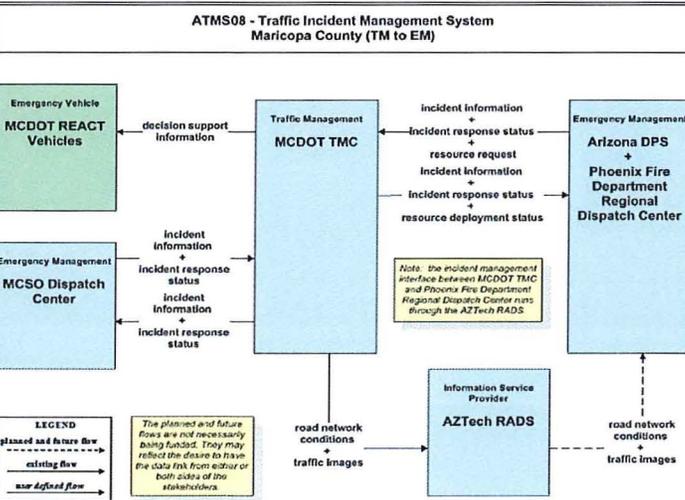
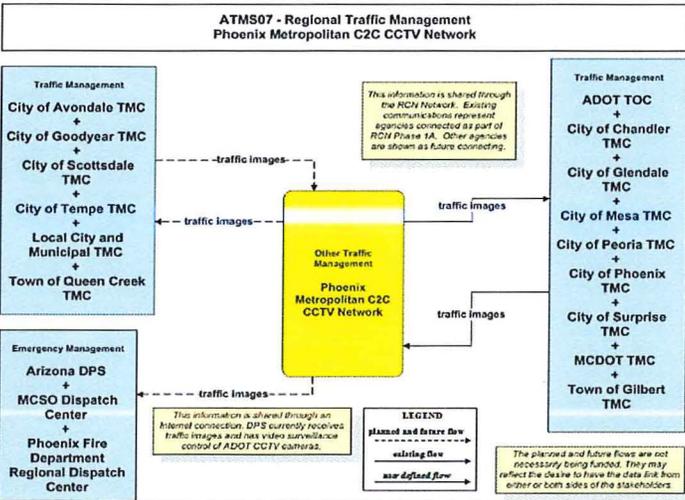
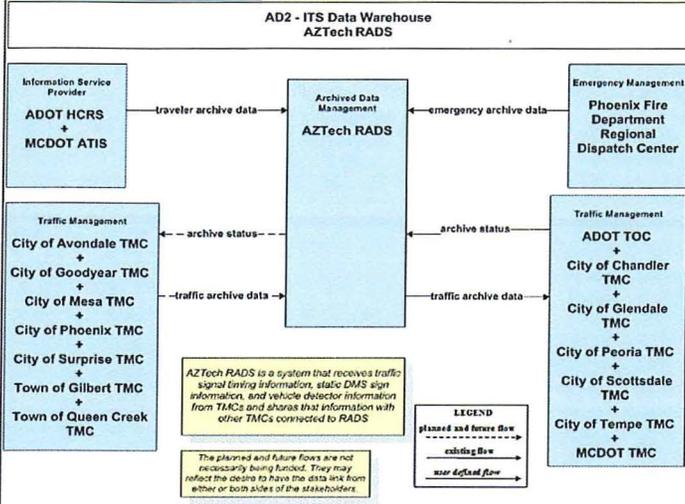
Yes, the agency intends to follow the process.

ITS Architecture Flow Diagram

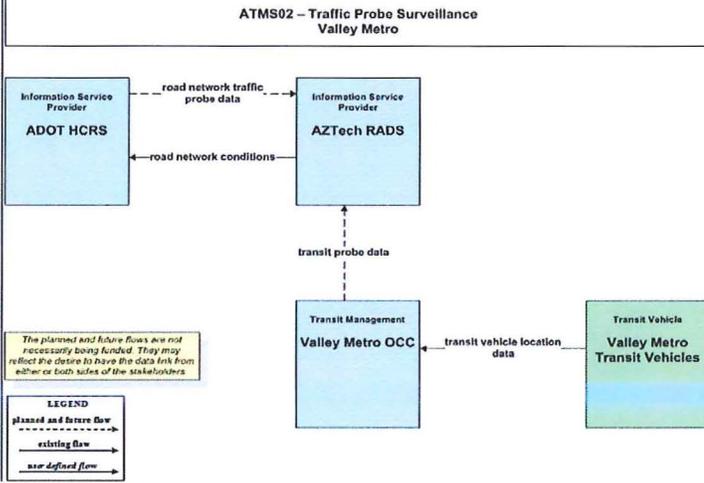
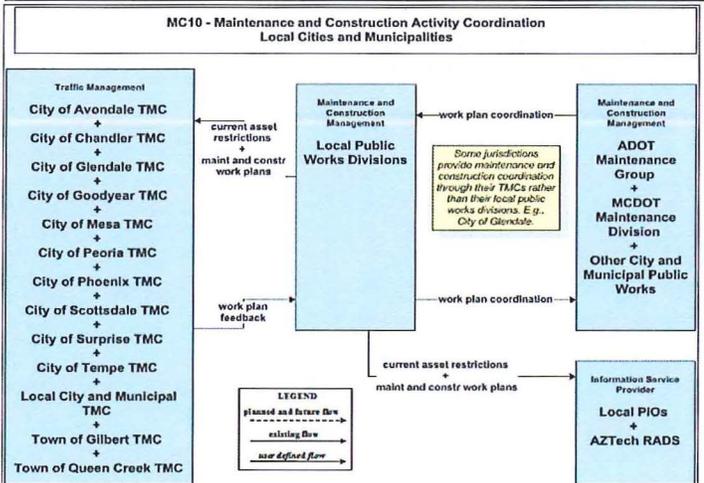
All relevant ITS Architecture Flow Diagrams MUST be inserted below for the relevant ITS Service Packages addressed by the proposed ITS project. This is to ensure that the project complies with the Regional ITS Architecture and meets a federal requirement for all federally funded ITS projects.

Find the relevant Service Packages addressed by the project in the MAG ITS Architecture (found in the link below). Copy and paste the graphic in the space provided.

[MAG Regional ITS Architecture](#)



ITS Architecture Flow Diagram



PROJECT COST ESTIMATE WORKSHEET
(Cost Estimates Are Required Regardless of Programming)

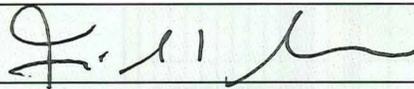
PROJECT COST ESTIMATE WORKSHEET (Cost Estimates Are Required Regardless of Programming)										
DESIGN	REQUESTED PROGRAMMING (Complete if item will be programmed in the MAG TIP)		Location Description		Maricopa County, Arizona					
			Work Description		Software and database development, virtualization, integration, and development of data and user interface					
			Funding Source		Local					
			Preferred Year to Program Work		2020					
	COST ESTIMATE FOR DESIGN				UNITS	QUANTITY	UNIT COST	TOTAL	USES FEDERAL AID	FEDERAL LOCAL
	PRELIMINARY ENGINEERING (15% plans) (Required for Budget)		Design Concept Report		LS	1	45,000	\$ 45,000.00	No	- 45,000
			Systems Engineering Analysis (must address FHWA requirements)		LS	1	5,000	\$ 5,000.00	No	- 5,000
								\$ -	No	- -
								\$ -	No	- -
	SUBTOTAL - PRELIMINARY ENGINEERING COSTS							\$ 50,000.00	-	50,000
FINAL DESIGN (30, 60, 95, 100% plans) (Required for Budget)		Final Software Design Documentation		LS	1	100,000	\$ 100,000.00	No	- 100,000	
							\$ -	No	- -	
							\$ -	No	- -	
							\$ -	No	- -	
SUBTOTAL - FINAL DESIGN COSTS							\$ 100,000.00	-	100,000	
TOTAL PRELIMINARY ENGINEERING AND DESIGN COST AVAILABLE FOR PROGRAMMING							\$ 150,000.00	-	150,000	
PROCUREMENT	REQUESTED PROGRAMMING		Location Description		Maricopa County, Arizona					
			Work Description							
			Funding Source		CMAQ					
			Preferred Year to Program Work		2020					
	COST ESTIMATE FOR PROCUREMENT				UNITS	QUANTITY	UNIT COST	TOTAL	USES FEDERAL AID	FEDERAL LOCAL
	PROCUREMENT COSTS							\$ -	Yes	- -
								\$ -	Yes	- -
								\$ -	Yes	- -
								\$ -	Yes	- -
								\$ -	Yes	- -
						\$ -	Yes	- -		
						\$ -	Yes	- -		
						\$ -	Yes	- -		
TOTAL - PROCUREMENT							\$ -	-	-	
CONSTRUCTION	REQUESTED PROGRAMMING (Complete only if construction will be programmed in the MAG TIP)		Location Description		Maricopa County, Arizona					
			Work Description		Software and database development, virtualization, data integration, and development of data and user interface					
			Funding Source		CMAQ					
			Preferred Year to Program Work		2020					
	COST ESTIMATE FOR CONSTRUCTION				UNITS	QUANTITY	UNIT COST	TOTAL	USES FEDERAL AID	FEDERAL LOCAL
	UTILITY RELOCATIONS (Required for Budget, May be 0 if no utilities) The cost of utility relocation for the transportation project are eligible for federal aid if the costs/activities involved are directly related to the transportation project. Generally, burying overhead utilities is cost prohibitive.							\$ -	Yes	- -
								\$ -	Yes	- -
								\$ -	Yes	- -
								\$ -	Yes	- -
								\$ -	Yes	- -
SUBTOTAL - UTILITY RELOCATION COSTS							\$ -	-	-	
CONSTRUCTION (Required for Budget)		Develop architectural pathway for software migration needs		EA	1	200,000	\$ 200,000.00	Yes	188,600 11,400	
		Implement virtual servers		EA	4	60,000	\$ 240,000.00	Yes	226,320 13,680	
		Develop software upgrade (includes database conversion and configuration)		EA	1	710,000	\$ 710,000.00	Yes	669,530 40,470	
		Configure and optimize data connections and user interface		EA	1	350,000	\$ 350,000.00	Yes	330,050 19,950	
							\$ -	Yes	- -	
SUBTOTAL - CONSTRUCTION COST							\$ 1,500,000.00	1,414,500	85,500	
MOBILIZATION AND ADMINISTRATION COSTS		CONTRACTOR MOBILIZATION (Typically 8% of construction cost)					\$ -	Yes	- -	
		TRAFFIC CONTROL (0-8% of construction cost)					\$ -	Yes	- -	
		CONSTRUCTION SURVEY & LAYOUT (Typically 1% of construction cost)					\$ -	Yes	- -	
		CONSTRUCTION CONTINGENCIES (Typically 5% of construction cost)					\$ -	Yes	- -	
		CONSTRUCTION ADMINISTRATION (Averaging 18% of construction cost)					\$ -	Yes	- -	
SUBTOTAL - MOBILIZATION & ADMINISTRATION COSTS							\$ -	-	-	
TOTAL UTILITIES, CONSTRUCTION AND MOBILIZATION FOR PROGRAMMING							\$ 1,500,000.00	1,414,500	85,500	
ADOT REVIEW FEE	Please enter 'Yes' if your agency is certified accepted by ADOT for construction									
	ADOT REVIEW FEE		AGENCY TYPE	RATE	HOURS	TOTAL	USES FEDERAL AID	FEDERAL	LOCAL	
	Contracts and Specs \ Advertise Project		Non CA	55	100	\$ -	No	-	-	
	District \ Review Stage Submittals		Non CA	50	40	\$ -	No	-	-	
	Environmental Planning \ Issue Clearance		All	50	40	\$ 2,000	No	-	2,000	
	Right of Way \ Issue Clearance		Non CA	55	24	\$ -	No	-	-	
	Compliance Review\ Compliance Review		Non CA	175	40	\$ -	No	-	-	
	Project Management Group\ Project Management		Non CA	120	100	\$ -	No	-	-	
	Project Management Group\ Project Management		CA Only	120	60	\$ 7,200	No	-	7,200	
	Utilities and Railroad Sections\ Issue Clearance		Non CA	50	24	\$ -	No	-	-	
TOTAL COST ESTIMATE							\$ 9,200	-	9,200	
							\$ 1,659,200	1,414,500	244,700	

Budget and Signature Page

Phase	Location Description	Work Description	Year to be Programmed	Funding Source	Federal Amount	Local Amount	Total	Local Share
Design, excludes ADOT review fees	Maricopa County, Arizona	Software and database development, virtualization, integration, and development of data and user interface	2020	Local	\$ -	\$ 150,000	\$ 150,000	100.0%
Construction	Maricopa County, Arizona	Software and database development, virtualization, data integration, and development of data and user interface	2020	CMAQ	\$ 1,414,500	\$ 85,500	\$ 1,500,000	5.7%
Total Programmed					\$ 1,414,500	\$ 235,500	\$ 1,650,000	14.3%
ADOT Design Review Fee					\$ -	\$ 9,200	\$ 9,200	100.0%
Total Cost					\$ 1,414,500	\$ 244,700	\$ 1,659,200	14.7%

Signature: To be signed and scanned with PDF copy that is sent to MAG via email

As the jurisdiction's manager/administrator or designated representative, I certify that the information contained in this application is accurate and complete and that the local funds for this project will be included in the sponsoring MAG member agency's local current CIP/TIP or budget document if the project is selected for federal funding.

Signature: 

fw
Name: Nicolaas Swart, P.E.

Title: Transportation Systems Management Division Manager

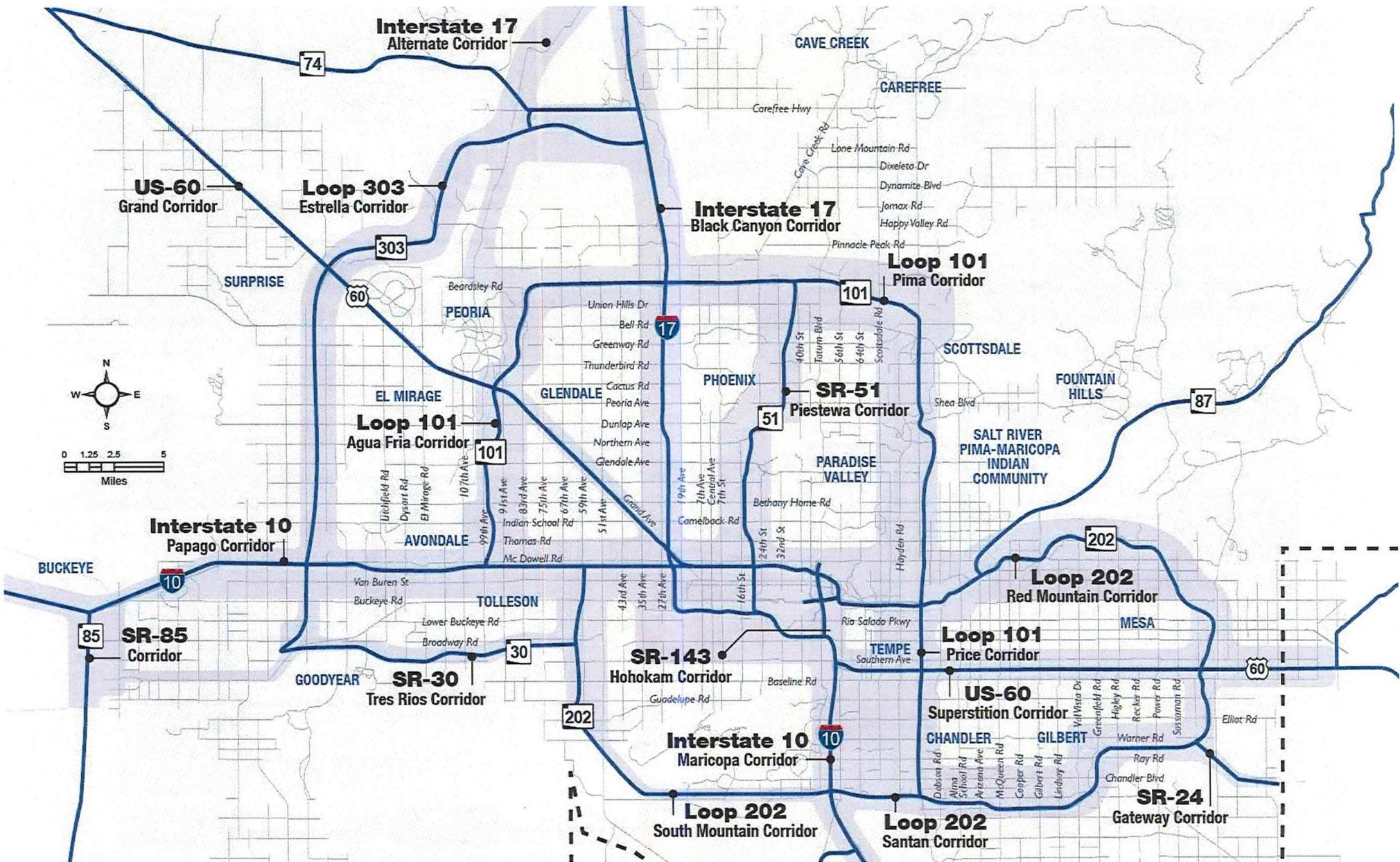
Date: 9/18/19

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.	
Contact Information	Complete?
Contact Information, fields 1 – 5	Yes
CMAQ Data	Complete?
1. Traffic Estimate and Roadway Characteristics: Fields a - i	Yes
2. Improvements in Traffic Management & Operations: Fields a - b	Yes
3. Other Improvements: As applicable	Yes
4. Traffic Flow Improvement Due to Project: Fields a - b	Yes
ITS Project Information	Complete?
Section 1 is complete	Yes
Section 2 is complete	Yes
Section 3 is complete	Yes
Section 4 is complete & a PDF file of map will be attached to the submittal to MAG	Yes
Section 5 is complete & all relevant Architecture Flow Diagrams have been inserted in the worksheet	Yes
Section 6 is complete	Yes
Section 7 is complete	Yes
Section 8 is complete	Yes
Section 9 is complete	Yes
Section 10 is complete	Yes
ITS Architecture Flow Diagram	Complete?
ITS Architecture Flow Diagram have been inserted	Yes
Prproject Cost Estimate Worksheet	Complete?
ITS Architecture Flow Diagram have been inserted	Yes
Budget & Signature Page	Complete?
Form is signed	Yes
Name, title and date fields are completed	Yes

STREET NAME	FROM	TO	RANK	Share of Work
Camelback Rd	Central	35th Ave	1	
Camelback Rd	32nd St	Central	2	
Baseline Rd	Rural	40th St	3	
Indian School Rd	Central	35th Ave	4	
Bell Rd	67th Ave	Del Webb	5	
Indian School Rd	32nd St	Central	6	
Bethany Home Rd	Central	35th Ave	7	
Northern Ave	Central	35th Ave	8	
Grand Ave	91st Ave	Thompson Ranch	9	
Bell Rd	Del Webb	Litchfield	10	
Glendale Ave	Central	35th Ave	11	
Thomas Rd	Central	35th Ave	12	
Indian School Rd	35th Ave	83rd Ave	13	
Thomas Rd	32nd St	Central	14	
Scottsdale-Rural	Elliot	McKellips	15	10%
Bethany Home Rd	SR 51	Central	16	
Bell Rd	Thompson Peak	Scottsdale	17	10%
Scottsdale Rd	McKellips	Lincoln	18	10%
Cactus Rd	Tatum	Cave Creek	19	
Bell Rd	7th Ave	43rd Ave	20	
35th Ave	Durango	Indian School	21	
Dunlap Ave	7th St	43rd Ave	22	
Shea Blvd	Via Linda	Scottsdale	23	
Thunderbird Rd	19th Ave	43rd Ave	24	
75th Ave	Buckeye	Indian School	25	
Country Club-Arizona Ave	Elliot	University	26	
51st Ave	Lower Buckeye	Indian School	27	
Chandler Blvd	Alma School	Rural	28	10%
Gilbert Rd	Elliot	University	29	
67th Ave	Buckeye	Indian School	30	
University Dr	Rural	40th St	31	
Washington St	Central	27th Ave	32	
Bell Rd	Tatum	Cave Creek	33	
Thomas Rd	64th St	32nd St	34	
Dysart Rd	MC 85	Indian School	35	
48th St	Baseline	I-10	36	
Mill Ave	Baseline	Curry	37	
Broadway Rd	Alma School	Rural	38	
Baseline Rd	40th St	Central	39	
Bell Rd	43rd Ave	67th Ave	40	
Olive Ave	43rd Ave	83rd Ave	41	
Glendale-Lincoln	32nd St	Central	42	

Indian School Rd	Loop 101E	64th St	43	
Alma School Rd	Queen Creek	Chandler	44	
Broadway Rd	Rural	40th St	45	
Northern Ave	SR 51	Central	46	
Scottsdale Rd	Shea	Frank Lloyd Wright	47	10%
7th St	Indian School	Dunlap	48	10%
Thunderbird Rd	43rd Ave	67th Ave	49	
7th St	Broadway	Indian School	50	
Arizona Ave	Queen Creek	Chandler	51	
McDowell Rd	64th St	32nd St	52	10%
Cooper-Stapley	Elliot	University	53	
Camelback Rd	35th Ave	83rd Ave	54	
Scottsdale Rd	Frank Lloyd Wright	Pinnacle Peak	55	10%
Peoria Ave	7th Ave	43rd Ave	56	
Glendale Ave	35th Ave	83rd Ave	57	
Gilbert Rd	Queen Creek	Chandler	58	
Thomas Rd	35th Ave	83rd Ave	59	
Thomas Rd	Loop 101E	64th St	60	10%
Bell Rd	Cave Creek	7th Ave	61	
Shea Blvd	Scottsdale	Tatum	62	
35th Ave	Indian School	Dunlap	63	
Ray Rd	Alma School	Rural	64	
Thunderbird Rd	67th Ave	103rd Ave	65	
McDowell Rd	32nd St	Central	66	10%
19th Ave	Indian School	Dunlap	67	
43rd Ave	Buckeye	Indian School	68	
Grand Ave	35th Ave	67th Ave	69	
43rd Ave	Indian School	Olive-Dunlap	70	
7th Ave	Broadway	Indian School	71	
16th St	Thomas	Northern	72	
Southern Ave	Rural	40th St	73	
McClintock Dr	Elliot	McKellips	74	
Scottsdale Rd	Lincoln	Shea	75	
Alma School Rd	Elliot	University	76	
Val Vista Dr	Elliot	University	77	
59th Ave	Buckeye	Indian School	78	
Central Ave	Broadway	Indian School	79	
59th Ave	Indian School	Olive	80	
Arizona Ave	Chandler	Elliot	81	
Cave Creek Rd	Bell Rd	Pinnacle Peak	82	
McQueen-Mesa	Elliot	University	83	
Apache-Main	Alma School	Rural	84	
19th Ave	Dunlap	Bell	85	
51st Ave	Indian School	Olive	86	
Bethany Home Rd	35th Ave	83rd Ave	87	
Greenway Rd	Tatum	7th Ave	88	
Northern Ave	35th Ave	83rd Ave	89	

Val Vista Dr	Queen Creek	Williams Field	90	
Peoria Ave	43rd	75th Ave	91	
Power Rd	Germann	Warner	92	
67th Ave	Indian School	Olive	93	
Cactus Rd	19th Ave	43rd Ave	94	
Olive Ave	83rd Ave	111th Ave	95	
Southern Ave	Alma School	Rural	96	
McDowell Rd	Central	35th Ave	97	
59th Ave	Olive	Bell	98	
Power Rd	University	Warner	99	
27th Ave	Indian School	Northern	100	
All other roads			101	0%



RADS Core Re-Architect Project

The initial target facilities for this project are those identified for ICM, including freeways and parallel arterials; however improvements to RADS will impact all facilities owned by transportation agencies who are currently connected to the system or intend to connect to the system in the future.

Field Devices

Freeway Operations

Regional Traveler Information

CCTV

DMS

Manual Text

Travel Time

MINUTES TO
SR-143 6
I-10 TUNNEL 14

Detector Station/Ramp Meter

DMS DTT

Post Message

Freeway Event Data

Freeway Travel Time

Freeway Detector Speed, Volume

ADOT TOC Operators

Events

AZTech RADS

Freeway and Arterial Travel Time

Arterial Event Data

ADOT FTP

AZ511.GOV

511 Phone

ISP & Data Users

AZ511.GOV Web Site

511

Traveler Information



Traveler Time Display at Sky Harbor & MCDOT

DMS DTT

TRAVEL TIME
I10 & SR143
10 MIN

Arterial DMS Travel Time

Incident Management



AZTech Regional Information System

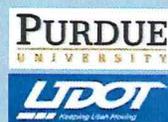
Real-time, Multi-jurisdiction Incident Notification and Monitoring Tool (12 jurisdictions)

Work Zone Data Exchange (WZDx)

Traffic Signal Performance



Inter-jurisdiction Traffic Signal Timing Data Sharing



Automated Traffic Signal Performance Measures (ATSPM) (9 Agencies)

Travel Time Data

Third-Party Travel Time Subscription

ARID Sensors

Jurisdiction Travel Time Systems



(Chandler, Mesa, Tempe, Gilbert)

Arterial Travel Time

Event Data

Phoenix Fire 911 CAD

Mesa Fire & Police 911 CAD

MCDOT RCRS

Construction Data
(10 Agencies)

Traffic Signal Data

ATMS Transuite, KITS, i2
(9 Jurisdictions)



Connected Vehicle Data Platform

Traffic Signal Controller High Resolution Data

MCDOT Video Detection

Signal Timing

High-Res Data

Travel Time Engine

Events Data Engine

Traffic Signal Data Engine

Data Warehousing