City of Buckeye

Intelligent Transportation Systems Strategic Plan

Technical Memorandum #4 – Transportation Systems Management and Operations

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1 INTRODUCTION

The City of Buckeye has received funding from the Maricopa Association of Governments (MAG) to develop an Intelligent Transportation Systems (ITS) Strategic Plan for the City. The goal of an ITS Strategic Plan is to identify strategies and tools to allow the City to manage its transportation network and information exchange more efficiently. ITS includes communications and field technologies that are integrated into the transportation network such as traffic signals, cameras, fiber optic communications, and central management software. ITS technologies are widely deployed throughout the MAG region, the County, and the world. The City is in a unique position to be able to develop an ITS Master Plan that will strategies the build out, operation, and maintenance of a comprehensive ITS network. That plan will need to be periodically updated as the City grows in both physical size and population.

1.1 Buckeye ITS Strategic Plan Process

The project to develop this Plan will include the following phases:

- **Establishing a Stakeholders Group** – identifying City staff and technical staff from other agencies to provide input into the Plan and guide its development.
- **Existing and Future Conditions** – learn about existing infrastructure, processes, resources, and planned activities within Buckeye.
- **Transportation Systems Management and Operations** – identify City focus areas related to transportation and information sharing such as operation of key corridors, management of events and incidents, and improved freeway coordination. The report will identify resources that will support the City in operations and management for those focus areas.
- **Needs and Strategy Development** – collect needs and challenges related to transportation operations and data/information sharing in the City to guide the development of ITS strategies to address those needs.
- **Funding and Implementation** – identify funding methods to help the City implement ITS strategies in a phased manner and obtain the necessary resources that will support for continuous operations and management of Buckeye's ITS and communications network.

1.2 Transportation Systems Management and Operations Overview

Transportation Systems Management and Operations (TSMO) is a term coined by the USDOT to describe an integrated program to optimize the performance of existing multimodal infrastructure through implementation of systems, services, and projects to preserve capacity and improve the security, safety, and reliability. The development of a TSMO program plan for an agency focuses on institutional capabilities and enabling business processes to help improve overall transportation system performance and safety. The goal of TSMO within the Buckeye ITS Strategic Plan is to develop a program plan that will provide the necessary structure for a comprehensive ITS Program through outlining the programmatic objectives, processes, procedures, and resources needed to deliver the ITS vision and goals.

With fewer funds available for agencies to 'build their way out of congestion', improving and optimizing the current/planned transportation network has become critical. Throughout the Country, agencies at all levels (federal to local) are using a TSMO lens to identify a wide range of functions aimed at reducing delay and improving mobility – clearing traffic incidents, providing real-time information to travelers, actively managing congestion using devices and systems, proactively developing traffic management plans for work zones and special events, among others. Both the Arizona Department of Transportation (ADOT) and MAG, are currently developing TSMO Plans to support the elevated management and operations of the State and regional transportation networks. Using technology and process solutions can:

- Lower capital and maintenance costs;
- Facilitate the efficient use of resources and funding for the transportation network;
- Establish partnerships within the City and with other agencies that can support Buckeye's ITS program; and
- Create a foundation for supporting a City ITS Program in the long-term.

The TSMO Program Plan will identify a vision and goals for operations and management of the City's transportation network, specific priority facilities, key agreements and coordination efforts, and recommended staffing and business models for supporting TSMO at the City. The goal of the TSMO plan within the Buckeye ITS Master Plan is to develop a strategy and approach that will provide for specific strategies and projects to develop and support a City ITS Program.

2 ITS MASTER PLAN IN BUCKEYE

The current Buckeye transportation network does not experience significant challenges related to congestion or delay, and the road system is able to operate effectively without real-time management of the traffic signals and other ITS devices. The following sections outline the ITS Master Plan organizations and the functions that can be supported when the active management of the transportation network is needed and desired by the City of Buckeye.

2.1 ITS Vision

The City of Buckeye's population is projected to increase by more than 400% by 2040. During this 20-year timeframe, the City is likely to reach a tipping point when there will be some combination of the following factors that would warrant the implementation of a management structure for Buckeye's ITS Program:

1) High levels of traffic volumes on city streets (particularly along the I-10 corridor) with frequent traffic incidents and crashes, leading to severe declines in the level of service in capacity and safety without an ITS Program
2) Needing to manage a range of 75-100 Buckeye-owned traffic signals.
3) Needing to manage 10+ miles of fiber optic cable communication that connects more than 50% of the ITS infrastructure in the City.
4) The introduction of a major traffic generator such as a special event venue that draws a significant crowd for City of Buckeye during ingress and egress or a major highway that brings volumes through the City that was not experienced before.

The goal of this ITS Strategic Plan is to provide Buckeye guidance in assembling a complete and robust ITS network so that Buckeye can actively coordinate, operate, and manage their transportation network when this tipping point is reached. As such, the City of Buckeye staff have a long-term vision for an ITS Program that, in its master planned buildout condition, allows the City to:

To optimize the capacity of the transportation system, improve safety, and reduce peak-hour demand on gateway arterials by facilitating real-time operation and management of the transportation network from the City's operational center and coordinating with neighboring agencies for cross-jurisdictional operations.

2.2 Management of the ITS Program

Figure 1 depicts the management structure for the Buckeye ITS Program to support real-time traffic management and operations in the City at the point where it becomes necessary. Connections between facilities marked with yellow arrows indicate fiber optic communications.

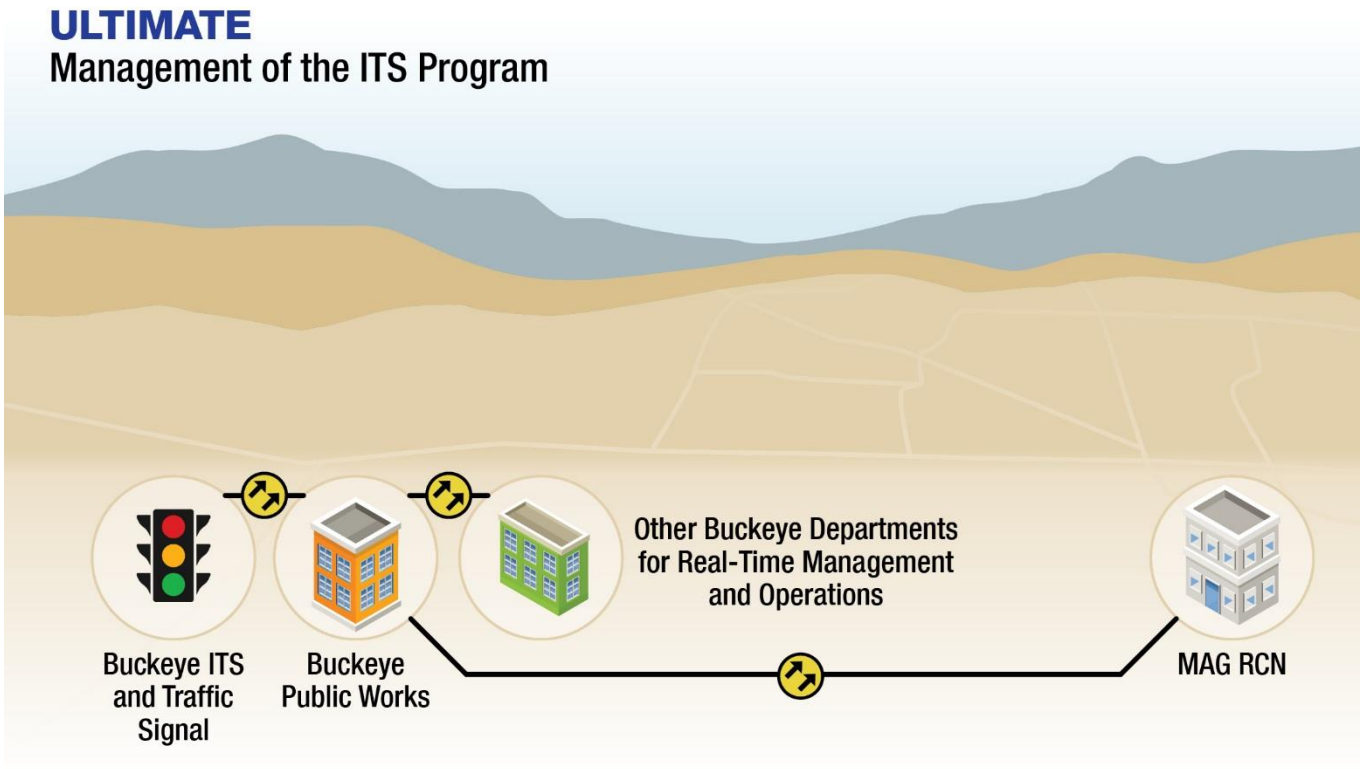

Figure 1: Master Planned Management Organization of the Buckeye ITS Program

The need for the ITS Program to be developed for the City is a growth and developer driven process. At the tipping point when ITS is needed to support traffic management, the City will need to assemble staff and resources to activate a traffic management center (TMC). The major step in establishing the Buckeye ITS Program is procurement of a City-owned Central Management System to establish an operational connection to traffic signals and other ITS devices that will be deployed and establishment of a TMC at the City Public Works Department. All traffic signals and devices will be connected to the Buckeye TMC via fiber optic communications to provide Buckeye operations staff with the ability to manage and operate ITS devices in real-time. By that point, the City of Buckeye will have an established ITS Program that includes adequate staffing, training, and ongoing funding for operations and maintenance of ITS infrastructure so that Buckeye can independently own and operate their ITS network in-house.

3 ITS FOCUS AREAS SUPPORTED BY TSMO

The TSMO approach is used to enable the successful implementation of future the ITS projects that will lead to the establishment of the ITS Master Plan in Buckeye that will facilitate a safe and efficient transportation network.

3.1 Priority Facilities for ITS

There are many reasons why a transportation facility is identified as a priority, especially when asking different people who have different roles and responsibilities within the City. During meetings with various departments at the City, there were roadways and intersections that were consistently identified as having safety and mobility challenges that could be directly addressed through an ITS solution and become the foundational facilities for the ITS Master Plan.

Buckeye roadways were identified as priorities for one or multiple of the following reasons:

- Experiences a high number of crashes at intersections;
- Experiences intersection congestion that impacts traffic flow on other roadways;
- Experiences delays that impact emergency response times;
- Accommodates freight movement; and
- Is used as an arterial detour route during freeway closures.

Table 1 below shows the high priority transportation facilities in Buckeye and the reasons for the prioritization.

Table 1: Priority Transportation Facilities in Buckeye

Priority Facility	Crashes	Congestion	Emergency Response Delay	Truck Route	Freeway Detour
Miller Road	X	X	X	X	X
Watson Road	X		X	X	X
Southern Avenue	X	X	X	X	
Monroe Avenue		X		X	
Yuma Road	X				X
Apache Road	X	X	X		
Broadway Road	X	X			X

As the City continues to grow and expand, this list of priority facilities will likely change and will need to be revaluated. The City should undergo a prioritization exercise for its roadways regularly, possibly coinciding with the updating of the 5-year CIP or an update to the City General Plan or Transportation Master Plan.

Other priority facilities within the City of Buckeye that are not owned by the City but that play significant roles in the Buckeye transportation network include: Interstate 10 (I-10); State Route 85 (SR 85); and Maricopa County Route 85 (MC-85). Any events on these roadways or improvements made to these roadways have subsequent impacts on the Buckeye transportation network, and thus Buckeye needs to be well appraised of the conditions of these roadways by establishing data sharing and/or coordination procedures with ADOT and Maricopa County DOT (MCDOT) as part of the ITS Master Plan.

3.2 ITS Infrastructure Deployment

Infrastructure deployment should start with the installation of traffic signals at warranted intersections, as well as the following ITS improvements:

- Installing EVP at all signalized intersections;
- Installing traffic monitoring camera technology to provide remote viewing capability, real-time monitoring of intersections, and faster incident identification and response;
- Connecting the intersections along corridors using fiber optic cable and to continue to build out Buckeye's fiber network toward the ultimate master planned fiber network; and
- Connecting traffic signals and ITS devices to a centralized management system to allow for remote monitoring and operations from the Buckeye TMC when established at the Buckeye Public Works Department.

Outfitting signalized intersections with ITS devices will enable the City to actively operate and manage the transportation network in real-time. This cannot be accomplished efficiently without fiber optic cable communications to ITS infrastructure and the establishment the City of Buckeye central signal system and TMC located at Public Works.

Fiber optic communications is the state-of-the-practice and should be the only medium used. This is supported by other partner agency experiences as defined in Tech Memo 1&2 where partner agencies offered their lessons learned for the City to consider when planning for their own ITS Program.

The City of Buckeye Engineering Design Standards should be modified to include provision for construction of ITS infrastructure (2-3" conduit for ITS and 2-3" conduit for City needs - fiber optic cables and appropriate pull box infrastructure). This will ensure that as the developments are built in Buckeye, the ITS infrastructure is also built to connect existing infrastructure to new infrastructure.

3.3 Operational Concept of Managing Non-Recurring Traffic Events

Non-recurring events include planned special events that generate out-of-the-ordinary traffic, construction/work zones, or incidents. Of these non-recurring events, the one that impacts the Buckeye transportation network the most is freeway incidents that result in freeway traffic detouring onto Buckeye streets. Currently, Buckeye does not have the capacity or infrastructure in place to manage detouring freeway traffic on the City network, and this type of situation causes congestion and delay in the City and on the freeway and makes the network susceptible to incidents during that time. This situation also impacts traffic incident management and emergency response times.

To address this, the TSMO approach helps identify infrastructure, systems and process strategies that will be outlined in the next task of this project and allow Buckeye to manage the network more effectively during these kinds of events. In the near-term, the City should work with ADOT to formalize a process for ADOT to notify the City about any construction or incident closures that occur on I-10 and SR 85 so that the City can be aware of the freeway traffic and be ready to respond to impacts. As Buckeye works towards developing its ITS Master Plan, the City Public Works, Engineering, and Police Departments need to work together to identify and document detour

routes on the City street network where freeway traffic will go during freeway closures. When the City transitions to a centrally managed system for traffic signals, special signal timing plans for the various intersections and detour routes need to be developed and input into a centralized signal system so that at TMC operator can change the signal timing plans in real-time as needed along the detour route to accommodate the detouring traffic and move it through the City more efficiently.

In addition to improving coordination with ADOT, Buckeye will also need to coordinate with adjacent jurisdictions, such as Goodyear and Maricopa County, for consistency of operations across agency boundaries and clear roles and responsibilities related to operations and incident management at these boundaries. When Buckeye transition is actively managing traffic at a Buckeye TMC, the TMC operators should coordinate and share information and signal timing plans with Goodyear and MCDOT to make sure that signal timing is seamless along this route and that the appropriate level of operations is provided at all points. This will also be true for the routes parallel to I-10 that will be used for freeway detouring during integrated corridor management. There should be collaboration with the City of Goodyear to ensure that the routes identified for I-10 detours are agreed-upon, that signal timing is coordinated, and that proper infrastructure on both sides of the municipal boundary is available for use to accommodate the detouring traffic.

Coordination with other agencies, such as the cities of Glendale and Surprise, will be needed in the future as the northern portion of Buckeye continues to be built out and new roadways are constructed that connect with existing roadways operated by these other agencies. These roadways are currently planned but there is identified funding source. Once funding is dedicated this roadway network will be constructed.

3.4 ITS Roles and Responsibilities

Within this strategic planning process, the City has a valuable opportunity to identify a staffing solution for the City ITS Program that is founded within the defined vision and needs of the agency. The proposed roles and responsibilities of functions to support the ITS Master Plan envisions that the implementation of the proposed staffing structure will merge appropriate staffing operations with the assets and opportunities that already exist within the City.

3.4.1 Staffing Considerations

The City may not want to pursue any staffing changes prior to acquiring a Centralized Traffic Management System as recommended in the ultimate buildout for the ITS Program. The City will need to determine appropriate staffing at that time when the ITS Master Plan is activated to support real-time traffic management and operations.

There are a few considerations when the City decides to pursue additional or adjusted staffing to account for a growing ITS Program:

- Heightened Skill Set – Centralized Traffic Management Systems are undergoing several fundamental changes, including the introduction of more sophisticated technologies (evolving ITS Programs), a shift to integrated operations (multiagency, multimodal), accessibility (mobile as well as stationary workstation use) and improvements to customer service capabilities. The increased demand for services and changes to Centralized Traffic Management System operations affects staffing practices. Increasing demand requires more employees and the necessary knowledge, skills, and abilities to handle the demand. Advances in technology that automate certain aspects of a Central Traffic Management System may reduce the number of employees required to manage the operations, however, employees with higher level skills will be required.
- Redundant Support Structure – It will be important to foster and maintain staff skills redundancy through greater training and cross-training so that there is more than one person with the knowledge and skills to operate and maintain ITS equipment and systems.

- Centralized Traffic Management System Architecture – Another major difference with a large impact on staff planning is whether the Centralized Traffic Management System operations function out of a traditional TMC with workstations and a video wall, or if the Centralized Management System is operated on a virtual basis with a few City personnel (from offices or mobile platforms) having permissions level access to certain parts of the system.

3.4.2 Staffing for the ITS Program

Rather than hiring a group of specific ITS personnel, the City should focus on a few strategic positions that would be responsible for ITS operations and management in the City, including a Traffic Engineer, and the personnel responsible for ITS infrastructure maintenance. This section discusses the ITS "functions" rather than specific job descriptions or specific personnel. There may be one or multiple personnel required to fulfill an ITS "function" as identified in this section.

City Engineering and Public Works should jointly manage the ITS Program with key staff in each department being responsible for coordinating in the overall management, operation, and maintenance of the ITS Program. **Table 2** provides a summary of roles and responsibilities involved in the management and operation of the ITS Master Plan. There are roles for both management and day-to-day activities. There are responsibilities covering the entire lifecycle of an ITS system – budget management, device configuration, changes in signal timing plans, and maintenance of uptime of devices.

Table 2: Buckeye ITS Program Roles and Responsibilities

Role	Responsibility	Coordination
Traffic Engineer Function (ITS Program Management)		
Management	• Manage the overall Buckeye ITS Program • Participate in regional ITS meetings and coordination activities • Work with regional ITS partners • Oversee the design of traffic signals, including approval of new or modified timing plan policies and procedures • Oversee the design of electronic traffic control devices other than traffic signals • Interface with equipment manufacturers and developers • Set and manage the IP address scheme for ITS devices • Set and manage network address assignments for ITS including system configuration and network management of the fiber optic communications network • Management of all TMC software and device passwords • Testing of updated TMC software versions • Operate/CIP budget management for TMC activities and traffic signal projects • Oversee the conformance with City ITS Standards and maintain the City Standard Drawings	**Direct Report:** Engineering Deputy Director **Others:** Public Works Director; TMC Manager

Role	Responsibility	Coordination
Day-to-Day Operations	• Develop signal timing plans for use by TMC function and oversee their implementation • Complete communication failure system reports, identify communication failures (field to servers to workstations,) and alert Maintenance function or Communications function to address communications failures in the field • Address traffic signal timing concerns from the public and staff • Respond to traffic signal record inquiries (lawyers, insurance companies, subpoenas, citizens, etc.) • Coordinate with contractors working at signalized locations for phasing/timing changes • Address inter-jurisdiction traffic signal timing concerns	**Direct Report:** Engineering Deputy Director **Others:** Public Works Director; Streets Superintendent
Traffic Management Center Function (ITS Operations)		
Management	• Manage TMC staff and activities • Manage the ITS Database, including TMC equipment lifecycles	**Direct Report:** Streets Superintendent **Others:** Maintenance Foreman
Day-to-Day Operations	• System Operation (including video, detection, traffic signals) • Select appropriate signal timing plan(s) at an intersection or for a corridor to address congestion and incidents • Address ingress/egress traffic issues during non-recurring traffic events • Direct work to the Maintenance function if issues arise Interface with other agencies on an as-needed basis • Work with Traffic Engineer function to implement new signal timing plans or temporary construction signal timing plans	**Direct Report:** Streets Superintendent **Others:** Traffic Engineer; Maintenance Foreman
Maintenance Function (ITS Maintenance)		
Management	• Maintain the traffic signal records including as-builts for all existing signal infrastructure • Operate/CIP budget management for Maintenance function • TMC and fiber optic communications to field equipment and software systems (including contracts for support/upgrades) • Provides and maintains uptime of mobile/remote access to systems	**Direct Report:** Streets Superintendent **Others:** Traffic Engineer; TMC Manager
Day-to-Day Operations	• Maintain on-line status of uptime of: Fiber Communications, Traffic Signals, CCTV Cameras, other traffic control devices in field – device configuration protocol changes to be made in coordination with TMC function and Traffic Engineer function • Test traffic signal equipment in the shop and field • Manage manufacturer services contracts for equipment tied to the Signal Shop • Purchase and maintain traffic signal equipment inventory • Coordinate traffic signal work with developers • Arizona Blue Stake traffic signal locate duties • Provide inspection for all traffic signal installations and modifications	**Direct Report:** Streets Superintendent **Others:** Traffic Engineer; TMC function; ITS Technicians

3.5 Partnerships to Support the ITS Program

Partnerships and agreements give the City the ability to leverage internal and regional initiatives and collaborate on successes of new technology or operations. The suggested partnerships and agreements are directly correlated to the recommended ITS strategies purpose and function. Individual relationships as defined prior in this project are organized into the appropriate partnership descriptions in this section in order to support the future creation of agreements or standard procedure language.

3.5.1 Internal and External Partnerships

3.5.1.1 Buckeye ITS and ADOT

The City of Buckeye is surrounded and intersected by ADOT facilities, including I-10 and SR 85. The operations of the freeways within the City of Buckeye jurisdiction have significant impact on the Buckeye transportation network, especially when operations are interrupted due to construction activity or an incident. For Buckeye to successfully manage and operate their transportation network in the ITS Master Plan condition, it may be necessary to have frequent coordination and communications with ADOT operations staff, including formalized notification processes and procedures for when events occur on the freeway as well as coordination on the planning and eventual expansion of the west valley roadway network. This is especially important as the planning and construction of critical facilities, such as future freeways SR 30 and I-11, have been advancing forward in the regional transportation priority outlook. Formalizing the process for ADOT to notify the City about any construction or incident closures that occur on I-10 and SR 85 will be an important step toward better notification of freeway conditions that will impact the City.

3.5.1.2 Buckeye ITS and Other Internal Departments

The City Engineering, Public Works, and Police Departments and other potential departments as required should coordinate efforts related to City management of systems and infrastructure particularly during incidents. These include activities such as detour plan development and implementation for ADOT freeway incidents.

3.5.1.3 Buckeye ITS and Other Arterial Agencies

In addition to the MAG RCN, the AZTech Regional Archived Data System (RADS) and the AZTech Regional Information System (ARIS) are important resources to support the sharing of traffic, incident, and traveler information between jurisdictions.

- RADS provides each agency with web-based access to view traffic signal timing plan information from other jurisdictions on an as needed basis without being able to modify others' timing plans.
- ARIS provides each agency with a username/password with web-based access to retrieve the latest status of incidents occurring on the freeway network in their jurisdiction. An area of interest is established for each agency based on where that agency would like to receive information about the freeway network. Arterial incident information is programmed to be an upgrade to the system and will help the City know what is happening in the neighboring jurisdictions.

The City could greatly benefit by connecting to the neighboring City of Goodyear as well as MCDOT and ADOT. Coordination with neighboring agencies to share information and signal timing plans to coordinate corridor mobility will be important as the region expands and populations continue to increase.

There is also a need from MCDOT to extend their ITS network to MCDOT-owned ITS/signal system infrastructure within and adjacent to Buckeye's City limits. Opportunities to collaborate on projects to accomplish this will be identified in the ITS strategies in the next task.

As with the intra-jurisdictional connectivity needs, telecommunications security policies are needed for any interjurisdictional connections to Goodyear, MCDOT, and ADOT.

3.5.2 Type of Agreements to Consider

The strategies identified within the ITS Strategic Plan involve coordination and partnerships with internal departments and regional agencies. Establishing these partnerships early will provide the ITS Program with more opportunities. The City will need to pursue agreements and coordination with regional agencies and internal departments to assist in implementing ITS strategies, maximizing benefits of ITS devices and systems, and improving the City's participation in regional initiatives. There are four types of agreements and coordination to establish a line of communication and operations:

Intergovernmental Agreement (IGA)

IGAs and Memorandum of Understanding (MOU) are legal agreements that are used when agencies are looking to share resources, services, and/or information. Both of these types of agreements identify the purpose and scope of the agreement and roles and responsibilities of each party. These agreements are legal contracts that hold each party to the outlined terms and conditions and will establish the level of coordination as well as the limits of coordination. Limits can be helpful for agreements involving things such as bandwidth capacity of a communication network or the liability of archived video information.

Memorandum of Understanding (MOU)

The use of an IGA or MOU by the agencies in the MAG region depends on whether funding or resources are needed to support the purpose or scope of the agreement. For example, agencies will use an IGA when sharing operations and maintenance of a physical device or utilizing MCDOT regional incident management support services (REACT). Alternatively, when agencies are sharing CCTV images or committing to participate in a regional committee, agencies typically use an MOU.

Standard Operating Procedure (SOP)

An SOP formalizes responsibilities regarding facilitating cohesive operations and inter-agency and inter-departmental support by establishing lines of communication. It creates a venue to discuss recent initiatives, collaborating opportunities, real-time information of roadway conditions, project updates, etc. Formal coordination such as an SOP requires a defined reoccurrence or communication. An example of formal coordination might include a weekly status meeting that is held between two departments to discuss on-going projects and resolve any issues.

Informal Coordination (IF)

Informal coordination can be in the form of in-person meetings, e-mails, and phone calls. Informal coordination is reaction-based communication. An example of informal coordination is when the City Police Department calls Public Works to report a traffic signal maintenance need that resulted from an accident to which the Police responded. In this case, the informal agreement involves the identification of a point of contact at Public Works that the Police Department would contact for these purposes. Informal coordination could also include participation in Committee meetings to pursue funding opportunities for the City to grow the ITS Program.

Standard Details and Specifications (DT)

Transportation Standard Details and Specifications will need to be created and adopted to provide for ITS and communications requirements as part of road installations or improvements during construction and development.

3.5.3 Recommended Partnerships

Partnerships provide the opportunity to capitalize on local and regional initiatives and funding programs. These encompass internal, local, and regional partnerships that should be pursued to improve the effectiveness and efficiency of the communication and data sharing. **Table 3** shows the recommended partnerships that should be established within the City and with other agencies.

Table 3: Recommended Partnerships

Level of Partnership	Agency/Department/Division
Internal	• Engineering Department • Public Works Department • Police Department • IT Department • City Manager's Office/PIO • Development Services Department
Local	• City of Goodyear • City of Avondale • City of Surprise • City of Glendale
Regional	• MAG • ADOT • MCDOT

Table 4 identifies types of agreements that should be pursued with regional agencies and internal departments for the buildout of the ITS Master Plan. The table also indicates the types of activities that would warrant an agreement.

Table 4: Recommended ITS Program Agreements

Partnering Agency/ Department	Action							
	Share Camera Images	Sharing of Crash Data	Signal Coordination and Management	Incident Management Support	Traveler Information	Share/Maintain Fiber/ Communications	Half Street Improvements	Funding Support/ Coordination
Internal Departments								
Engineering Department	SOP	SOP	IF	SOP	SOP		DT	
Public Works Department	SOP		IF	SOP	SOP	SOP	DT	
Police Department	SOP	SOP		SOP	SOP			IF
IT Department								SOP
City Manager's Office/PIO					SOP			
Development Services Department							DT	

Partnering Agency/ Department	Action							
	Share Camera Images	Sharing of Crash Data	Signal Coordination and Management	Incident Management Support	Traveler Information	Share/Maintain Fiber/ Communications	Half Street Improvements	Funding Support/ Coordination
External Agencies								
MAG								IF
ADOT	IGA		IGA	IGA	IGA	IGA		IGA
MCDOT	IGA		IGA	IGA	IGA	IGA		IGA
City of Goodyear	MOU			SOP		MOU		
City of Avondale	MOU			SOP		MOU		
City of Surprise	MOU			SOP		MOU		
City of Glendale	MOU			SOP		MOU		

IGA – Intergovernmental Agreements
MOU – Memorandum of Understanding
SOP – Standard Operating Procedure
IF – Informal Coordination
DT – Standard Details and Specifications

4 NEXT STEPS

The focus of this document was on the key processes, partnerships and institutional capabilities that are recommended to support the successful implementation of the ITS Master Plan in the City. The next task will involve the identification of specific strategies or projects that are recommended that will help create the Buckeye ITS Program. While the TSMO approach focus on the enabling structures, the strategy development task will include the hard infrastructure, process development, and staffing strategies that will likely involve time and funding to implement. The recommendations in the strategies task will provide the City with a prioritized list of projects that can be submitted for funding (if needed) and will collectively build the Buckeye ITS Program.