COMMUNICATIONS MATRIX

This matrix can be used to support agencies that are interested in the various methods of communicating with their infrastructure/systems to see how others are utilizing communications in their jurisdiction. The MAG RIA does not prescribe specific types of technologies or methods of communication to ITS program elements – but this matrix provides agencies with additional guidance on the methods typically used in the Region to connect to ITS program elements. The communication matrix provided below identifies the use of communication systems throughout the local agencies within MAG regional area. The matrix indicates whether the agency has an active Traffic Management Center (TMC) and direct, non- direct, or internet based communication for ITS devices or systems.

DIRECT: Direct communication is a physical system that connects to two fixed points allowing the physical network to send a larger amount of data back to the TMCs. Due to the capability of carrying larger data direct connection is commonly used for CCTV, DMS, and vehicle detection. Direct communication is the predominant system used in the metropolitan Phoenix area because of the established fiber networks. Local agencies use that are included in the Regional Communication Network (RCN), for example, is a private fiber network dedicated for transportation use in the region.

NON-DIRECT: Non-direct communication is fairly new technology that does not need a physical connection to another device to send data but rather uses a wireless connection to transmit data. In the metropolitan Phoenix area, non-direct communication is a technology that is being employed more in recent years for traffic signal and ITS device connectivity where fiber optic cable direct communications are not feasible or cost-effective. Backhaul connections to fiber network systems are generally the strategy used by agencies with wireless networks.

INTERNET-BASED: Another type of communication utilized in the metropolitan Phoenix area is internet-based. The ADOT Highway Closure and Restriction System (HCRS), for example, is a regional repository of information that users input data to the repository utilizing internet-based login/password.

Legend: D = Direct (Fiber / blue); ND = Non-Direct (Wireless / green); I = Internet Based (orange)

City	TMC	Traffic Signals	Stop Bar Intersection Detection	Advanced Intersection Detection	Loop Detection	Vehicle Image Detection	Bluetooth	Microwave	CCTV	DMS Arterial	Fiber Optic	Copper	Wireless	T1 Leased Lines	RCN	HCRS	Camera Cameleon	RADS	VDS
Avondale	X			ND	ND	ND					ND		ND						ND
Buckeye		D	D	D				D											
Chandler	X	ND*	D	D		D	D		D	D					I	I		I	
Gilbert	X	ND*	D		D	D		D	D	D					I		I	I	
Glendale	X	ND*	D	D	D	D			D	D					I		I		
Goodyear	X	D	D		D	D			D	D							I		
MCDOT	X	D	D	D	D	D			D	D					D	D	D	D	D
Mesa	X	ND*	D	D	D	D			D	D					I	I		I	
Peoria	X	ND*	D		D	D			D	D					I	I	I	I	
Phoenix	X	ND*	D	D	D	D		D	D	D					I	I	I		
Queen Creek	X	D						D	D									I	
Scottsdale	X	ND*	D	D	D	D			D	D					I	I	I	I	
Surprise	X	D	D		D	D			D	D					I		I		
Tempe	X	D	D	D	D	D			D	D					I	I	I	I	
Youngtown																			

Legend:
- Direct (Fiber)
- Non-Direct (Wireless)
- Internet Based

* Wireless connection to traffic signals is used to backhaul data to fiber network.