

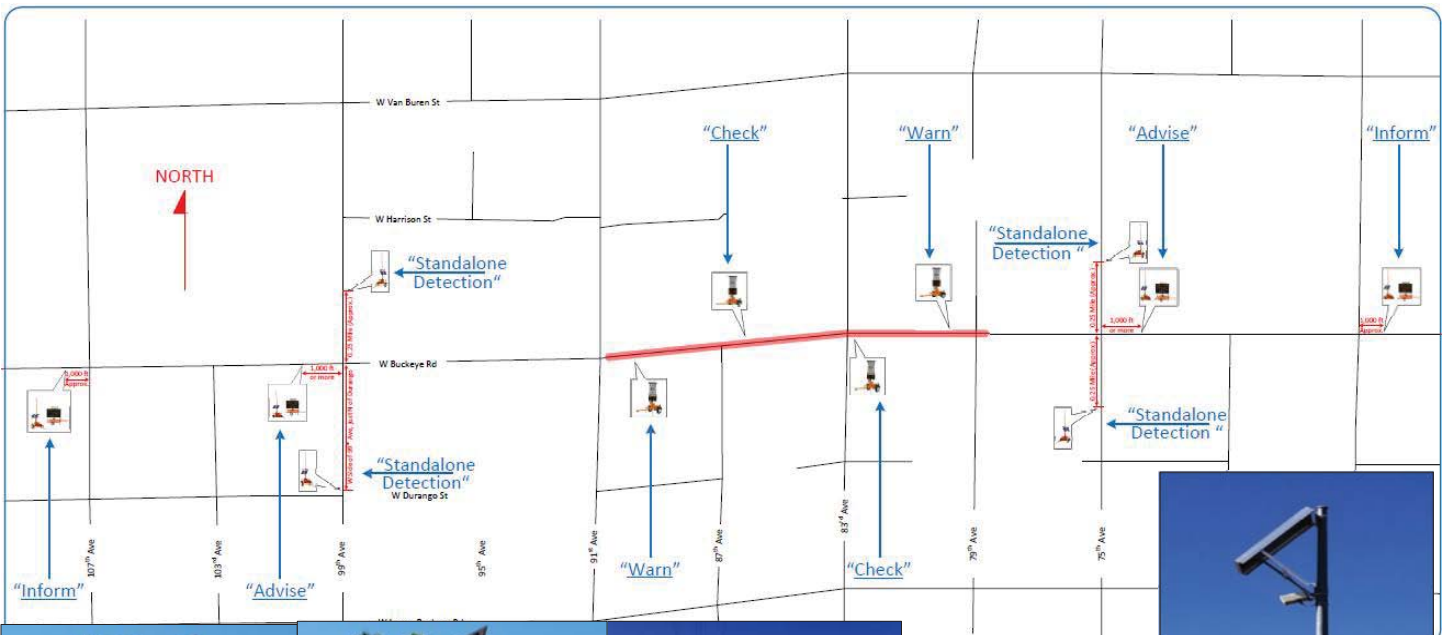
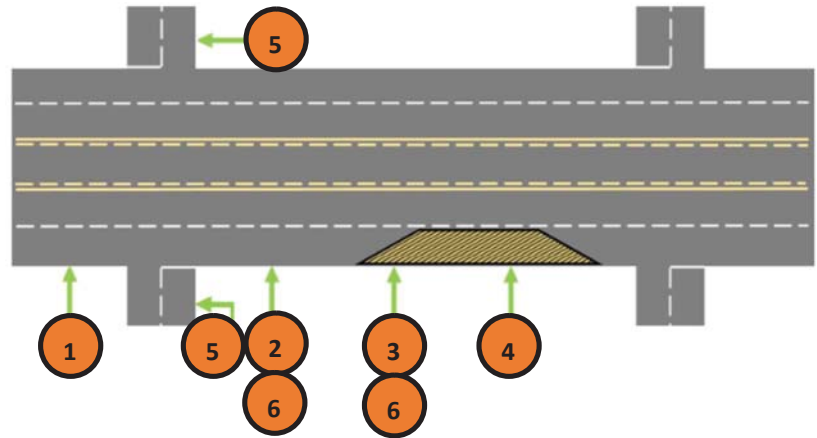


# MC-85 SWZ: Traveler Information in Work Zones

As part of AZTech and the Federal Highway Administration's Every Day Counts (EDC) initiative, the Maricopa County Department of Transportation (MCDOT) developed a concept for deployment for Smarter Work Zone (SWZ) technology at work zone sites. The purpose of this project is to support the design of a SWZ system that will be implemented during the construction of MCDOT's MC-85 project from 107th Avenue to 75th Avenue. While the concept will be piloted during the MC-85 project, it is intended that this concept would be adaptable to all MCDOT and AZTech partner work zones.

Through the project, a matrix was also developed to assist in selecting the appropriate SWZ components for different work zone needs. Nationally, there are a limited number of examples of arterial SWZ applications. AZTech is leading the way in SWZ innovation for arterials.

- 1 **INFORM**—VMS, Side-Fire Radar, ARID Traffic Detector
- 2 **ADVISE**—CCTV, VMS, Side-Fire Radar, ARID Traffic Detector
- 3 **WARN**—Speed Feedback
- 4 **CHECK**—Speed Feedback
- 5 **STAND-ALONE DETECTION**—Side-Fire Radar, ARID Traffic Detector on Alternate Routes supplemented by third party data
- 6 **CVISN**—DSRC at ADVISE and WARN locations





# MC-85 SWZ: Traveler Information in Work Zones



- Types of data used for monitoring of system:
  - Side fire—speed, volume, classification
  - ARID—travel times
- VMS messaging thresholders are based on travel times detected by ARID
  - ARID is compared with third party data on alternate routes
  - Cannot put ARID devices everywhere, variety of detection methods for different data purposes
- Alternate routing is important component of this arterial smart work zone deployment
  - Evaluation will be completed to determine impacts on traffic volumes and movement by smart work zone presence

## 1 PCMS

### Eastbound (EB) MC 85 **INFORM** PCMS



FAULT	DEFAULT	SLOW	MAJOR
Error / Issue	Check > ## mph & TT <= 8 min "Free flow"	Check < ## mph & TT = >8 min	Check < ## mph & TT = >20 min
<b>CONST NEXT 4 MILES</b>	<b>CONST NEXT 4 MILES</b>	<b>CONST NEXT 4 MILES</b>	<b>TIME TO 75TH 20+ MIN</b>
	<b>TIME TO 75TH XX MIN</b>	<b>TIME TO 75TH XX MIN</b>	<b>CONSIDER ALT ROUTE</b>
			<b>TIME TO 75TH XX MIN</b>

Second Phase of Message when Travel Times (TT) for alternate routes are TT= >20min =

## 2 PCMS

### Eastbound (EB) MC 85 **ADVISE** PCMS



FAULT	DEFAULT	SLOW	MAJOR
Error / Issue	Check > ## mph & TT <= 8 min "Free flow"	Check < ## mph & TT = >8 min	Check < ## mph & TT = >20 min
<b>CONST NEXT 3 MILES</b>	<b>CONST NEXT 3 MILES</b>	<b>CONST NEXT 3 MILES</b>	<b>TIME TO 75TH 20+ MIN</b>
	<b>TIME TO 75TH XX MIN</b>	<b>TIME TO 75TH XX MIN</b>	<b>CONSIDER ALT ROUTE</b>
			<b>TIME TO 75TH XX MIN</b>

\*These are preliminary VMS messaging although is being adjusted during project deployment as necessary

Second Phase of Message when Travel Times (TT) for alternate routes are TT= >20min =