

# MAG RSA - PA Program

2019 Arizona ITE Breakfast Series

July 24, 2019

MAG Transportation Safety Program

# MAG RSA - PA Program - History

- ▶ Dec 2010 - Two-Day RSA workshop by FHWA & ADOT
- ▶ June 2014 - RSA Workshop Refresher & PAs added
- ▶ Oct 2015 – MAG STSP strategies; 2005 update, Transit RSAs
- ▶ August 2016 – RSA Summit
- ▶ September 2019 – Upcoming RSA Summit
- ▶ Total Intersection RSAs = 70; Over 10 PAs
- ▶ Total cost = around \$2 million at \$30,000 per RSA on average
- ▶ MAG UPWP budget of \$300,00 annually

# MAG RSA -PA Program



- ▶ Formal assessment of safety performance; proactive, independent team, focus on intersections and corridors
  - ▶ 10 week process; develop team, data collection, briefing, field reviews, draft and final RSA report
  - ▶ Independent multidisciplinary team consisting of
    - ▶ Local Law Enforcement
    - ▶ Road Safety Education
    - ▶ Road/Traffic Engineering
    - ▶ Emergency Medical Response
    - ▶ Human Factors Expert
- ▶ PAs: Includes development of RSA recommendations; further analysis, 15% design, assess potential for HSIP funding
  - ▶ 13 week process; kick-off meeting, review of RSA, field review, develop draft and final PA



# MAG RSA - PA Program



- ▶ Site Identification Process
  - ▶ MAG Network Screening considering: Crash Frequency (25): Crash Severity (50): Crash Type (25)
  - ▶ Top 100 List based on the latest five years of crash data
  - ▶ Locations nominated based on detailed crash data analysis of Top 100 → working group → Safety Committee
- ▶ RSA process, Reports → Inform PA
  - ▶ Provide data to consultants; further analysis by RSA team ahead of briefing
  - ▶ Revise scope to provide flexibility on schedule; based on data
  - ▶ PA locations based on local agency nomination

# Data Driven RSA Location Identification

Manner of Collision	Total	%	Citywide %	Region %
ANGLE	18	9%	25%	23%
HEAD_ON	6	3%	2%	2%
LEFT_TURN	84	43%	25%	20%
OTHER	3	2%	3%	3%
REAR_END	71	36%	30%	36%
REAR_TO_REAR	0	0%	0%	0%
REAR_TO_SIDE	0	0%	0%	0%
SIDESWIPE_SAME	9	5%	8%	8%
SIDESWIPE_OPP	3	2%	1%	1%
SINGLE_VEH	2	1%	5%	7%
UNKNOWN	0	0%	0%	1%
<b>Total:</b>	<b>196</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Driver Condition	Total	%	Citywide %	Region %
ALCOHOL	24	3%	4%	4%
DRUGS	2	0%	1%	1%
FELL ASLEEP	0	0%	0%	1%
ILLNESS	3	0%	0%	0%
MEDICATIONS	0	0%	0%	0%
NO_APPARENT_INFLUEN	669	85%	82%	80%
NO_TEST_GIVEN	2	0%	0%	0%
OTHER	0	0%	0%	1%
PHYSICAL IMPAIRMENT	2	0%	0%	0%
TEST_GIVEN	15	2%	2%	3%
TEST_REFUSED	0	0%	0%	0%
TESTING_UNKNOWN	3	0%	1%	1%
UNKNOWN	69	9%	9%	10%
<b>Total:</b>	<b>789</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

# Data Driven RSA Location Identification

LT Crash Driver 1 Violation	Total	%	Citywide %	Region %
DID_NOT_USE_CROSSWALK	0	0%	0%	0%
DISREGARDED_PAVEMENT_M	0	0%	0%	0%
DISREGARDED_TRAFFIC_SIGN	14	8%	6%	6%
DROVE_RODE_IN_OPPOSING	1	1%	0%	0%
ELECTRONIC_COMMUNICATI	0	0%	0%	0%
EXCEEDED_LAWFUL_SPEED	0	0%	0%	0%
FAILED_TO_KEEP_IN_PROPER	0	0%	0%	0%
FAILED_TO_YIELD_RIGHT_OF	45	25%	25%	20%
FOLLOWED_TOO_CLOSELY	0	0%	0%	0%
INATTENTION_DISTRACTION	6	3%	4%	6%
KNOWINGLY_OPERATED_WIT	0	0%	0%	0%
MADE_IMPROPER_TURN	19	11%	10%	11%
NO_IMPROPER_ACTION	77	44%	45%	44%
OTHER	4	2%	3%	4%
OTHER_UNSAFE_PASSING	0	0%	0%	0%
PASSED_IN_NO_PASSING_ZO	0	0%	0%	0%
RAN_STOP_SIGN	0	0%	0%	1%
REQUIRED_MOTORCYCLE_SA	0	0%	0%	0%
SPEED_TO_FAST_FOR_CONDI	5	3%	2%	2%
UNKNOWN	6	3%	4%	4%
UNSAFE_LANE_CHANGE	0	0%	0%	0%
WALKED_ON_WRONG_SIDE	0	0%	0%	0%
<b>Total:</b>	<b>177</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

# Data Driven RSA Process

Month	Total	%	Citywide %	Region %
January	14	7%	8%	8%
February	15	8%	8%	8%
March	17	9%	9%	9%
April	16	8%	8%	9%
May	17	9%	8%	8%
June	19	10%	6%	7%
July	14	7%	7%	7%
August	19	10%	8%	8%
September	13	7%	9%	8%
October	15	8%	10%	9%
November	20	10%	9%	9%
December	19	10%	9%	9%
Total:	198	100%	100%	100%

Day of Week	Total	%	Citywide %	Region%
MONDAY	36	18%	15%	14%
TUESDAY	27	14%	16%	16%
WEDNESDAY	26	13%	15%	15%
THURSDAY	23	12%	15%	16%
FRIDAY	31	16%	17%	17%
SATURDAY	31	16%	12%	13%
SUNDAY	22	11%	9%	9%
Total:	196	100%	100%	100%

Time	Total	%	Citywide %	Region %
12 - 1 AM	5	2%	1%	1%
1 - 2 AM	0	0%	1%	1%
2 - 3 AM	2	1%	1%	1%
3 - 4 AM	2	1%	1%	1%
4 - 5 AM	0	0%	1%	1%
5 - 6 AM	7	2%	1%	1%
6 - 7 AM	5	2%	3%	3%
7 - 8 AM	8	3%	7%	6%
8 - 9 AM	8	3%	6%	5%
9 - 10 AM	10	4%	4%	4%
10 - 11 AM	13	5%	4%	5%
11 AM - 12 PM	19	7%	5%	5%
12 - 1 PM	18	6%	6%	6%
1 - 2 PM	22	8%	6%	6%
2 - 3 PM	32	11%	7%	7%
3 - 4 PM	28	10%	9%	9%
4 - 5 PM	34	12%	9%	9%
5 - 6 PM	19	7%	9%	9%
6 - 7 PM	16	6%	7%	7%
7 - 8 PM	10	4%	4%	4%
8 - 9 PM	9	3%	4%	3%
9 - 10 PM	7	2%	3%	3%
10 - 11 PM	8	3%	2%	2%
11 PM - 12 AM	1	0%	2%	2%
Total:	283	100%	100%	100%

# RSA Final Report

- The final report includes the following:
  - ▶ RSA Team
  - ▶ Positive site observations
  - ▶ Recommendations based on the RSA teams' perspective of priority rank of potential to improve safety performance
  - ▶ Crash Modification Factors for the suggested improvements



# Final PA Reports

- ▶ All the elements of a PA completed for ADOT, including environmental, cultural resources, etc.
- ▶ 15% Construction Cost Estimates
- ▶ Benefit/Cost ratio
- ▶ Provides preliminary assessment of safety improvements that could compete for State-wide HSIP funding

Questions?