Arizona Department of Transportation

Road Safety Assessment Program:

Identification to Solution

Kerry Wilcoxon, P.E., PTOE

State Traffic Safety Engineer

ADOT Traffic Safety Section









2019 Arizona ITE Breakfast Series

July 24th – Road Safety Assessment Programs

Road Safety Assessment

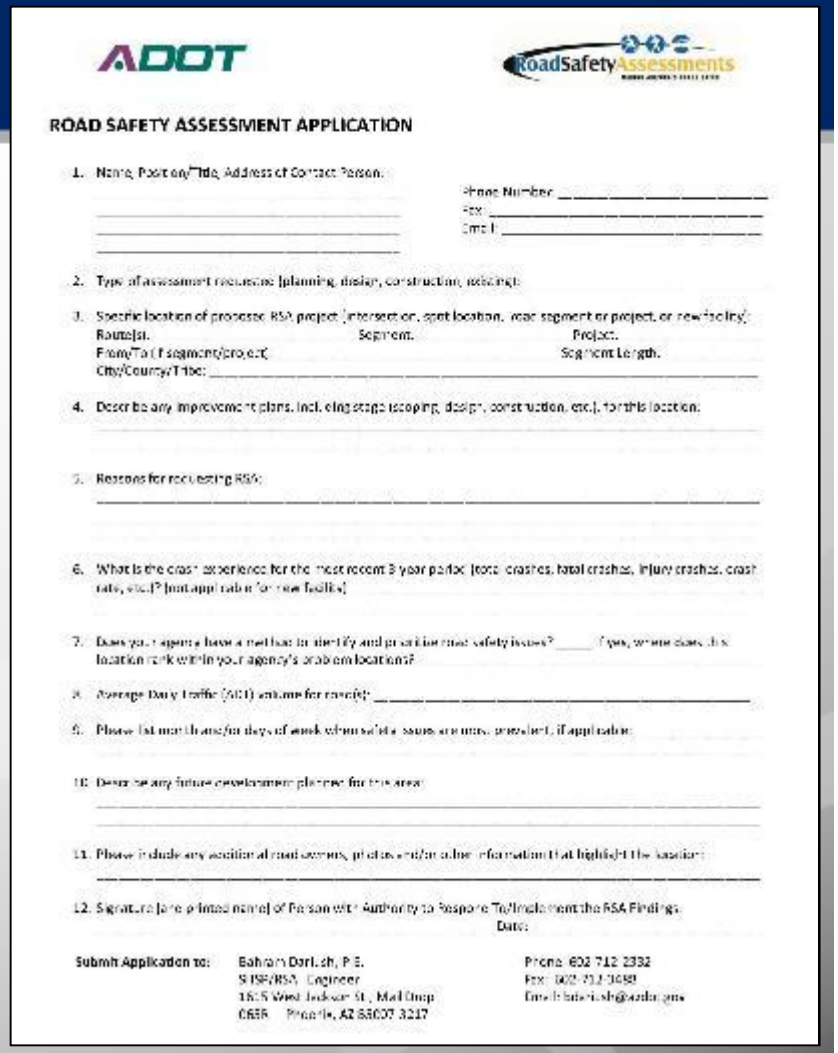
A formal safety performance review of an existing or future road or intersection by an independent, multi-disciplinary team.

- Proactive in nature
- Field observation - day, night, peak, off peak
- Focused on road safety
- Multimodal - peds, bikes, ADA, transit, trucks

RSA Application

One page document to provide owner input and concern. Includes:

- Reason for the RSA
- Crash Experience
- ADT
- Road Owner
- Future Development?



ADOT RoadSafetyAssessments

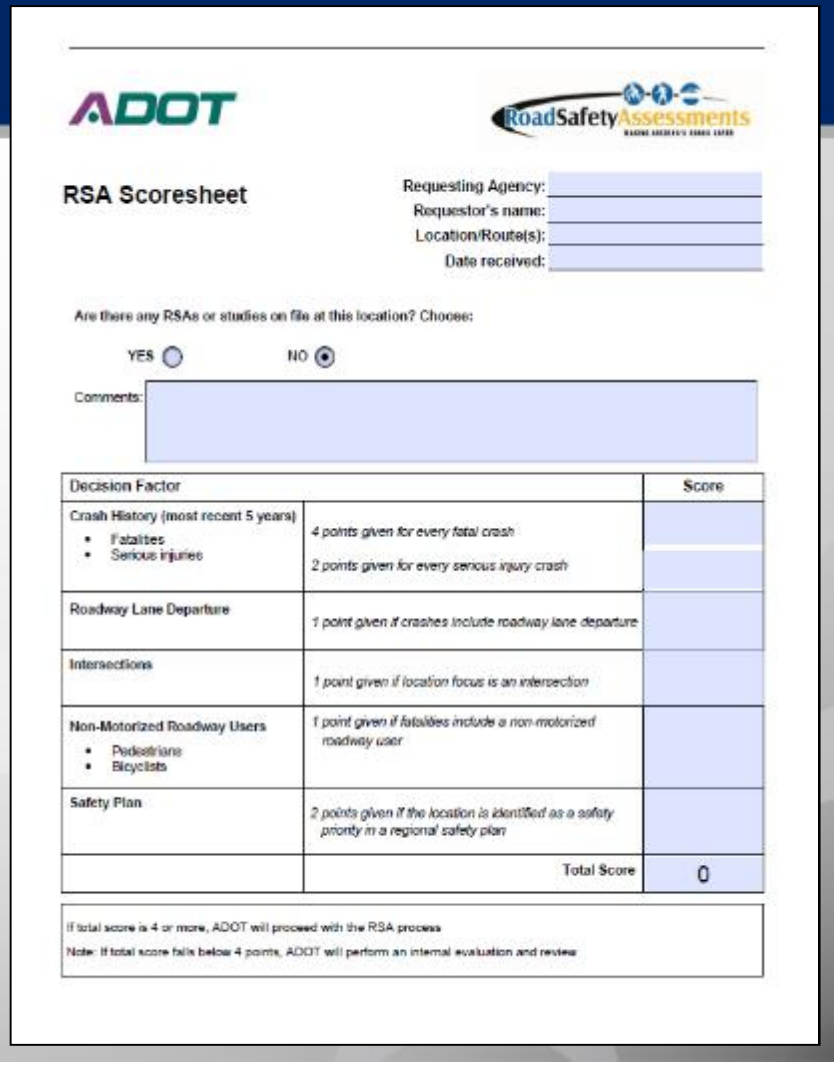
ROAD SAFETY ASSESSMENT APPLICATION

1. Name, Position/Title, Address of Contact Person:
   Phone Number: _____
   Fax: _____
   Email: _____
2. Type of assessment requested: (planning, design, construction, existing):
3. Specific location of proposed RSA project: (intersection, spot location, road segment or project, or new facility)
   Route(s): Segment: Project:
   From/To: (segment/project) Segment Length:
   City/County/Tribe: _____
4. Describe any improvement plans, including stage (scoping, design, construction, etc.), for this location:
5. Reasons for requesting RSA:
   _____
6. What is the crash experience for the most recent 3 year period: (fatal crashes, total crashes, injury crashes, crash rate, etc.)? (not applicable for new facility)
7. Does your agency have a method to identify and prioritize road safety issues? _____ If yes, where does this location rank within your agency's problem locations?
8. Average Daily Traffic (ADT) estimate for road(s): _____
9. Please list more than one day of week when vehicle counts were made, provided, if applicable:
10. Describe any future development planned for this area:
    _____
11. Please include any accident diagrams, photos and/or other information that highlights the location:
    _____
12. Signature (and printed name) of Person with Authority to Respond To/Implement the RSA Findings: Date:

Submit Application to: Bahram Dorlaghi, P.E.
SHSP/RSA Engineer
1615 West Jackson St., Mail Drop 068R Phoenix, AZ 85007-3217
Phone: 602 712 2332
Fax: 602 712 3038
Email: bdorlaghi@azdot.gov

RSA Application Scoring

- Priority
  - Higher scores first
  - Fatal/Serious Injury – consultant
  - Minor injuries or safety concern – ADOT staff
- Outcome
  - K/A crashes may make state or HSIP funding eligible (CM dependent)
  - Others likely state funding only



ADOT

RoadSafetyAssessments

RSA Scoresheet

Requesting Agency:
Requestor's name:
Location/Route(s):
Date received:

Are there any RSAs or studies on file at this location? Choose:

YES ○ NO ◉

Comments:

Decision Factor		Score
Crash History (most recent 5 years) • Fatalities • Serious injuries	*4 points given for every fatal crash* *2 points given for every serious injury crash*	
Roadway Lane Departure	*1 point given if crashes include roadway lane departure*	
Intersections	*1 point given if location focus is an intersection*	
Non-Motorized Roadway Users • Pedestrians • Bicyclists	*1 point given if fatalities include a non-motorized roadway user*	
Safety Plan	*2 points given if the location is identified as a safety priority in a regional safety plan*	
	Total Score	0

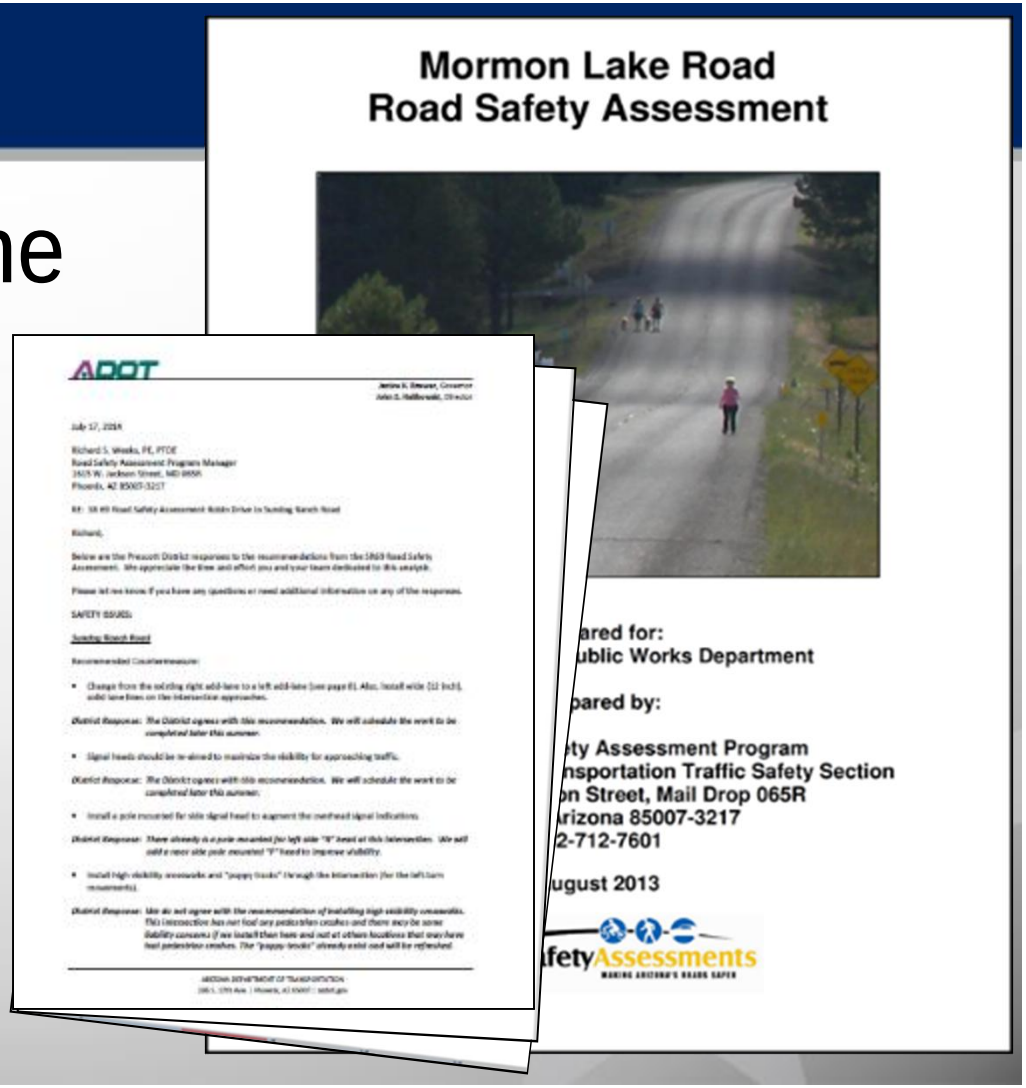
If total score is 4 or more, ADOT will proceed with the RSA process
Note: If total score falls below 4 points, ADOT will perform an internal evaluation and review

Typical RSA Process

- Identify the project or road to be assessed
- Select RSA team
- Perform field observations under various conditions
- Present RSA findings to Project Owner/Design Team
- Project Owner/Design Team prepare formal response
- Incorporate findings into the project when appropriate

Typical RSA Outcome

- Report of findings from RSA Team
- Formal response to recommendations from project owner
- Goal – 12-14 RSA/yr.



RSA Benefits

One of the best ways to assess safety at a specific location, especially with no other obvious alternatives







ADOT RSA Lessons Learned

RSAs often:

- Slow
- Expensive
- Ineffective

Slow

Typical ADOT Timeline from Application:

- Field Review 3 months
- Final Report 5 months
- HSIP Project 3-5 years

Reasons:

- Scoping
- Competitive bidding
- Scheduling

Combined ECS and RSA Processes

Step ID	Step Name	Area of Responsibility	Duration in weeks
1	RSA Received, Acknowledge Received, Concurred by DE /RTE/OWNER, Crash Analysis, Score, and Scope	TSS	1
2	ECS New added Process: Firms to respond to the Statement of Interest	ECS	2
3	ECS New added Process: Panel	ECS	2
4	Selected Consultant & Scoping Meeting	TSS	1
5	Consultant Prepares Scope & Cost Proposal	CONSULTANT	1
6	ADOT Review and Comment of First Cost Proposal	TSS	1
7	Final Negotiation and Final Cost Proposal from Consultant	TSS/CONSULTANT	1
8	ESC Complete and Accurate Review (Simple 14 Determination)	ECS	0.4
9	Task Order Modification Finalize, Encumber, Sign and Notice to Proceed	ECS	2.8
10	RSA kickoff & Field Review	TSS	1
11	Prepare RSA Draft Report	TSS	3
12	RSA Team Review of Draft Report	TSS	1
13	Review Comments.	TSS	1
14	Final Report Submitted	TSS	0.5
15	Owner's response	TSS	2
Total			20.7
		1 Week = 5 days	

Expensive

- 12-14 RSAs per year
  - $500,000/yr. Program Budget
- 1.5 Full-time staff members
- Few resulting projects





Ineffective

- Devalues staff expertise
- Sometimes used as delaying tactic
  - Residents, electeds, management need some action now!
- Easily diverted from primary focus
  - Squirrels!
- Quantity over quality
  - $/page



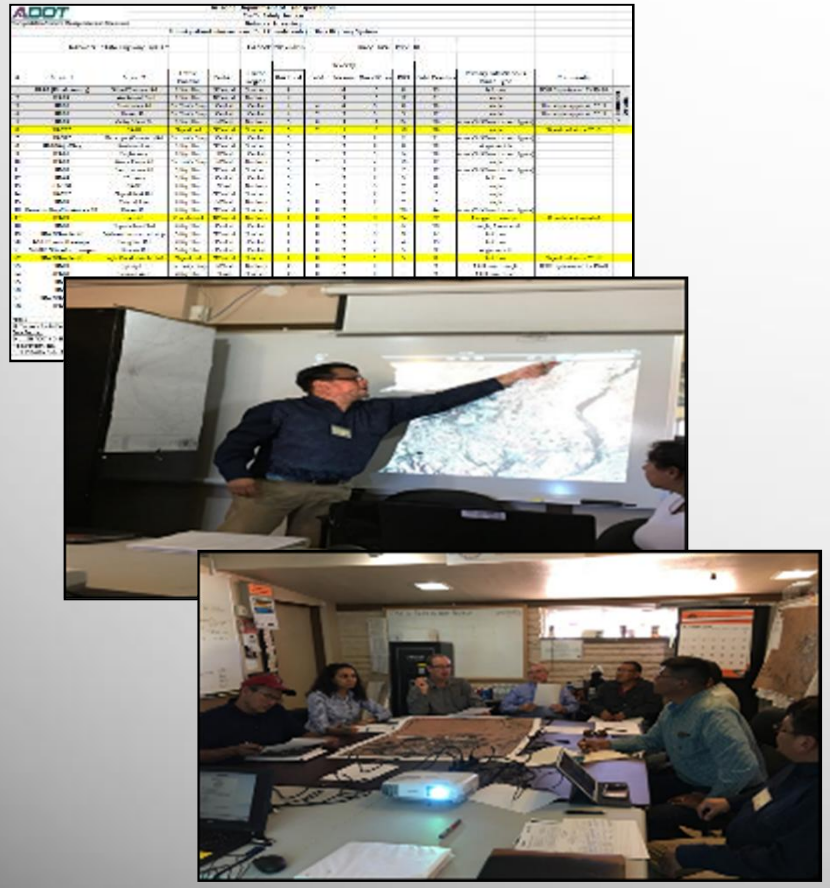


New Focus



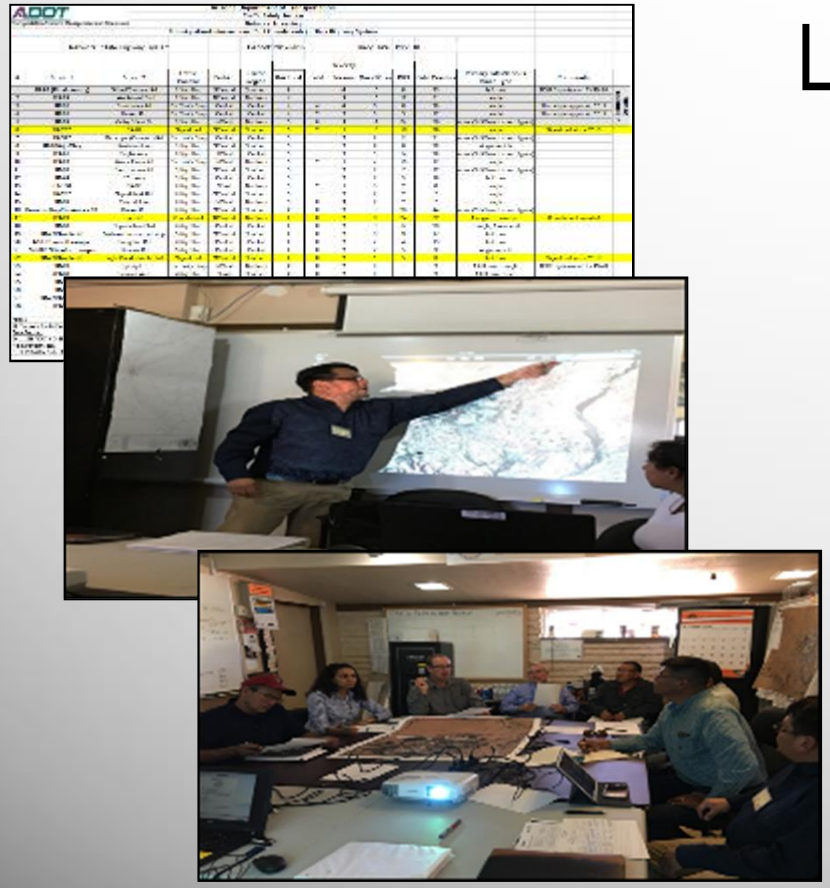
- Local first
- Walk the walk
- "No dry holes" *– British Petroleum Mantra*





Local First

- Re-value existing staff
  - Use the smart people you hire
- Recognize solutions may be in plain site
- Use existing services
  - Paint and signs are easy
  - “What can we do today to make a difference?”



Local First - Implications

- Staff level evaluation of potential RSA locations
  - Output from network screening
  - Site specific data evaluation
- Table top evaluation of possible countermeasures
  - Group reviews

Walk the Walk

- Take a second look at the data
- Drive, walk, talk the site
- Think!







Walk the Walk - Implications

- Staff level field reviews
- Coordination with other sections
- Meet with residents







"No dry holes"

- Use consultants as last resort
- Push them
- Expect results







"No dry holes" Implications

- Specific solutions up through 15% design
- B/C estimate

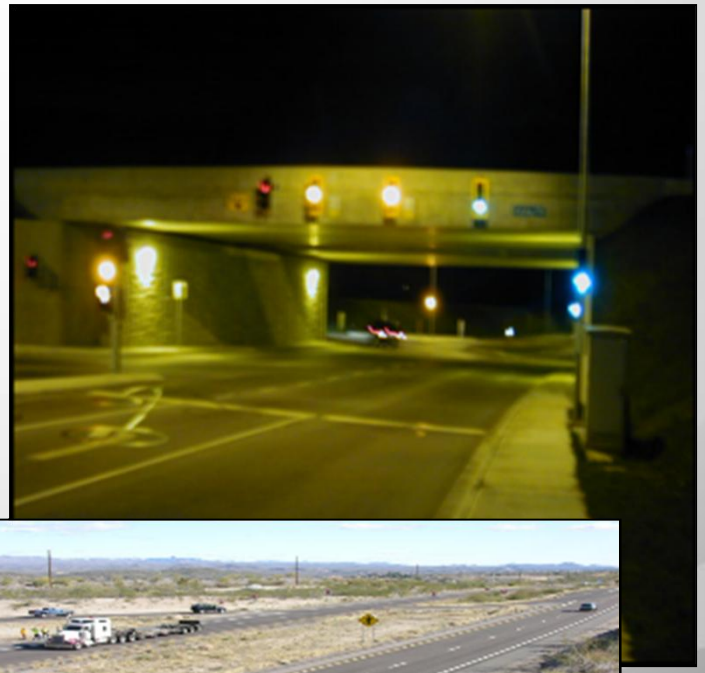






New ADOT Goals

- 50-75 Field Reviews per year
- 15-20 Table top RSAs
- 5-7 Independent RSAs
- 50-60 Treatments per year





ADOT ARIZONA DEPARTMENT OF TRANSPORTATION

Thank you!

Kerry Wilcoxon, P.E., PTOE
602-712-2060
Kwilcoxon@azdot.gov

RSA Program Administrator
Bahram Dariush, P.E.
602-712-2332
bdariush@azdot.gov