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New Year Greetings

By Becky Crowe, RSA Program Manager
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Happy new year! I hope you were able to enjoy time with family and friends over the holiday season and that you have lots of wonderful memories from 2010. I recently came across a great quote from Bill Voss, President of the Flight Safety Foundation. “The absence of accidents doesn’t necessarily mean you’re safe. What you really have to look at are thousands of things that lead up to the accident in the first place.”

Bill Voss might have been talking about airplane crashes when he made this quote, but he might as well have been talking about the Road Safety Audit (RSA) process. Identifying roadway safety issues and then taking steps to mitigate them is the entire concept of an RSA. While we will never be able to completely control all of the variables that lead to crashes, we are in the unique position to affect the safety of the road with the use of RSAs. We see it with every RSA— no matter where it’s performed or when it’s performed. It’s a group of people taking a fresh look at a road and identifying all of the things that might lead up to a crash, and then coming up with recommendations on how to fix the issues to prevent crashes from occurring.

2011 promises to be another exciting year for the RSA Program and I look forward to supporting all of your efforts. Thank you for supporting RSAs and I hope you enjoy this issue of the RSA Newsletter!

For more information, please visit:

<http://safety.fhwa.dot.gov/rsa>

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RSAs Make History: Design Visualization Projects

Due to the recognized benefits that transportation agencies are realizing with RSAs, the use of this effective safety countermeasure has expanded into several new areas. Many agencies are conducting pedestrian RSAs as well as incorporating RSAs with their Safe Routes to School Program. This past summer, RSAs continued to make history when FHWA began piloting the use of 3-dimensional (3D) renderings of designs that RSA teams used to perform safety examinations of pre-construction projects.

The first groundbreaking RSA of this nature was conducted in Rhode Island August 2–4 on the Burma Road corridor located on Aquidneck Island. A number of factors, including driveway access points and traffic signals, has created significant delays for drivers seeking to go from one end of Aquidneck Island to the other. In response to this

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congestion, a conceptual alignment of a new limited-access roadway across the U.S. Naval Station in Newport has been proposed. Since Burma Road South is currently nothing more than a concept, and a field review was not possible, the RSA Team used a detailed 3D model of the proposed road to conduct the RSA. Two alternatives were reviewed as part of the conceptual design. The first alternative included signalized intersections at the north and south limits, and the second included roundabouts at these intersections. The roundabout option of the proposed Burma Road South was preferred by the RSA Team over the traditional signalized intersections due to a number of design features that would enhance safety and operations, including:

- *Elimination of left turns at intersections.*
- *Natural traffic-calming effect.*
- *Decreased intersection delay.*
- *Aesthetic appeal.*

As part of the RSA, the team also provided suggestions on the preliminary conceptual designs of the proposed bypass corridor. RSA recommendations included:

- *Lighting to improve night-time visibility and driver awareness of the roundabout conditions.*
- *Large enough radius to accommodate trucks.*

- *Extending proposed left-turn lanes to provide additional storage for turning vehicles.*

A second RSA using 3D models was conducted in Belgrade, Montana August 31 – September 2. The RSA Team reviewed plans for several proposed improvements in connection with interchanges for Interstate 90 (I-90), including a proposed new on-ramp from Amsterdam Road (U-602) to eastbound I-90. As part of the review, the team evaluated several design options for the proposed on-ramp construction. A 3D model was created and used to visualize existing and proposed conditions to assist the RSA team in performing their evaluation. The model allowed the RSA team to “see” what proposed conditions could be like given the physical characteristics within the project limits. This in turn enabled the team to evaluate the operational and safety pros and cons of the various design alternatives for the on-ramp.

One of the alternatives presented was construction of a new eastbound on-ramp adjacent to the existing ramp. Some of the pros and cons that the RSA Team identified for this alternative included:

Pros:

- *Introduces gaps for ramp traffic with signalization.*

- *Can be constructed within the existing right-of-way.*

Cons

- *Relocates the queuing problem.*
- *Introduces an additional access / conflict point to the Interstate.*
- *Creates the potential for wrong way use of the off-ramp.*

The team evaluated various other design alternatives, including the construction of a new eastbound on-ramp and merging the new ramp with existing eastbound on-ramps. For each design, the RSA Team identified safety and operational pros and cons.

Compromises and trade-offs are a normal part of the planning and design decision-making process. RSAs are intended to demonstrate the safety implications of planning, scoping, design and operational decisions and to ensure that safety does not “fall through the cracks”. RSAs are also an ideal tool to ensure effective stewardship of funding; it’s more cost-effective to incorporate safety from the beginning than to reconstruct after a project is built. As proven during these pilot projects in Rhode Island and Montana, using a 3D model during the RSA design phase allows agencies to proactively save lives and money by including safety improvements in the revised designs of proposed construction projects.



For more information on the RSA design visualization project, please contact **Becky Crowe** at Rebecca.Crowe@dot.gov

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For more information on the RSA pilot project in Montana, please contact **Marcee Allen** at marcee.allen@dot.gov

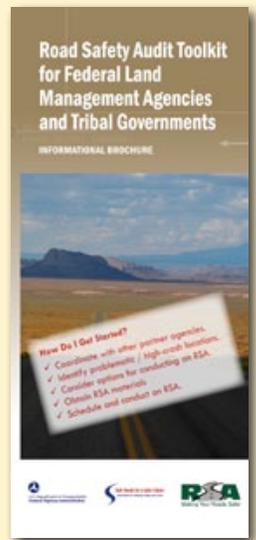
New Toolkit to Advance RSAs on Tribal and Federal Lands

For several years, as a part of RSA implementation, FHWA has provided training, technical assistance and led RSAs for Tribal governments and Federal Land Management Agencies (FLMAs), including U.S. Forest Service, National Park Service, U.S. Fish and Wildlife Service, and Bureau of Land Management.

To further advance implementation of RSAs on Tribal and Federal lands, the FHWA Office of Federal Lands and Office of Safety have partnered to develop an RSA Toolkit for Federal and Tribal Lands.

The Toolkit serves as a starting point for FLMAs and Tribes and provides information about partnerships needed to build support, available funding sources for the program and improvements, tools to conduct RSAs, and resources to identify safety issues and select countermeasures. Worksheets and other sample materials are provided to aid in the RSA process including requesting assistance, scheduling, analyzing data, conducting field reviews, and documenting issues and suggestions. Programs and experiences of other agencies are also included throughout to provide examples of successes and struggles in implementing RSAs and improving safety for all road users.

To obtain a copy of the Toolkit visit <http://flh.fhwa.dot.gov/>.



RSAs Introduced to Four Texas Counties

During fall 2010 four RSA training courses were provided to local agencies in Texas. These courses were coordinated by the Texas LTAP Center and were delivered in Williamson County, Bee County, Lavaca County and Travis County. Key participants included County Road Commissioners, road administrators, maintenance crew members, and law enforcement personnel. The courses introduced the RSA concept and the 8-step process and also highlighted low cost safety improvements local agencies can use to reduce crashes on their road network.

Howard McCann, Transportation Training Director with the Texas LTAP Center, coordinated and attended the training sessions. He reported, "Bottom line— they told us they really benefited from the class. As one County Commissioner put it, the 'fresh look from a new set of eyes' helped them to see things they had been overlooking."

With completion of this training, RSAs have been introduced in all 50 States, the District of Columbia and Puerto Rico. And we're not done in Texas yet! RSA Training will return to the Lone Star State next spring where an 8-hour course will be offered in March in conjunction with the Traffic Safety Conference in Austin (http://tti.tamu.edu/conferences/traffic_safety11/#more_info).



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RSA Featured in Local News

TV3 of Winchester, Virginia reported on a recent law enforcement-driven RSA conducted in Front Royal, Virginia. The segment contained brief interviews with members of the RSA team, touched on the reasons for the RSA, and discussed some of the resulting potential improvements.

Newscaster Steve Glazier interviewed two of the RSA team engineers, Stephen Read and Bryan Katz, as well as Officer Donald Orye who originally coordinated with VDOT and FHWA for assistance conducting the RSA through FHWA's RSA Peer-to-Peer Program. Front Royal town police and engineers learned of the RSA process through a 2009 Military Civilian Safety Workshop. After noting a high crash rate on US 522 in their town, police looked at utilizing the RSA process as a means to identify potential road safety improvements.

While overall crash rates in the town have shown a downward trend over the last two years, US 522/North Shenandoah Drive saw 72 crashes in the last year. The crash trend made this road segment a priority to assess for possible treatments. In addition to two intersections along US 522, engineers identified five other locations for assessment based on crash information from the VDOT record system crash data.

The RSA findings and recommended treatments ranged from low- to high-cost and short to long-term. The potential treatments included measures such as trimming vegetation, replacing worn pavement markings, increasing sign size, adding overhead directional signs, and installing traffic calming measures.



For more information on Front Royal RSA activities contact:
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Rhode Island Municipalities Using RSAs for Safe Routes to School Program

In celebration of the International Walk to School day on October 6, 2010, the Rhode Island Statewide Planning Program in conjunction with the Rhode Island Department of Transportation announced the 2010 Safe Routes to School grant award recipients at a public ceremony. The SRTS program will grant over \$2 million to encourage and enable more of Rhode Island's children to safely walk and bike to 16 elementary and middle schools in 10 municipalities. RSAs were used by 4 municipalities in preparing the SRTS grant applications.

<http://www.planning.ri.gov/transportation/srts/srts.htm>.

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Quarterly Highlights

➤ Rhode Island Safety Expo

RSAs were featured prominently during the Safety Expo held in Newport, Rhode Island September 20 – 22. Three separate sessions on RSAs were included on the conference agenda. The first session focused on the RSA Design Visualization Project, and the second session presented how RSAs are used in Illinois. The third session centered on using RSAs in the planning phase and featured MassDOT and Hampton Roads TPO. RSA training was also offered as part of the conference and the RSA booth was on display throughout the 3-day event.

➤ International Safety Media Award

The RSA video (<http://safety.fhwa.dot.gov/rsa/video2009/>) won an International Safety Media Award in September. The award was presented on Friday, September 24 during the closing ceremony of the 10th World Conference on Injury Prevention and Safety Promotion in London (www.safety2010.org.uk).



➤ RSAs for Planners

The first RSAs for Planners course was delivered to the Mo-Kan Regional Council in St. Joseph, MO September 30 – October 1

➤ Other RSA News

- The FHWA Work Zone Team is collaborating with the FHWA Office of Safety to create RSA prompt lists to address the work zone aspects of projects.
- A new TRB policy study regarding highway safety was released on November 16 and includes references recommending a U.S. Road Assessment Program. Special Report 300: Achieving Traffic Safety Goals in the United States: Lessons from Other Nations can be accessed at http://www.trb.org/Main/Blurbs/Achieving_Traffic_Safety_Goals_in_the_United_State_164388.aspx.
- A review of all Strategic Highway Safety Plans revealed that 32 States have included RSAs in their plans in some capacity.

