

# T<sup>2</sup> Roads on the Range

2012: Issue 1 Phone: 800-231-2815 Fax: 307-766-6784 www.eng.uwyo.edu/wyt2

# FROM THE DESK OF THE DIRECTOR

By Khaled Ksaibati

This newsletter issue contains several articles which will impact the way local governments do business around the state. The speed limit article summarizes the new standards for establishing speed limits on local roads. The cooperation of all parties involved in this process made these standards a reality. The Governor signed and approved these standards early in May. Setting speed limits uniformly statewide and across county lines will insure the highest level of

safety for the driving public. If your local government needs help in implementing the new standards, all you need is to contact us at the center and we will provide you with the necessary help.

On a different front, FHWA has issued new revisions for the MUTCD. These changes, described in the enclosed article, will help

you in developing strategies for insuring that your agency is in compliance with the newly established deadlines. We are currently working with our partners to insure compliance by local agencies around the state.

The Safety Management System Committee has updated the statewide Strategic Highway Safety Plan (SHSP). This plan is posted on our web site as

well as the WYDOT web site. You should consult with this SHSP when you are considering safety improvements in your jurisdiction. It should be mentioned here that the center is still providing help for those counties interested in implementing the Wyoming Rural Road Safety Program (WRRSP). The next deadline for submitting applications to the WRRSP is October, 2012. This program has provided funding for highway safety projects in half of the counties around the state.



In addition to the above topics, this newsletter includes our training agenda for the fall, 2012. The training topics that we are providing should help you and others in your agency in advancing your knowledge and insuring that you are taking advantage of the various programs that we are offering to help local governments. This year, there will be one

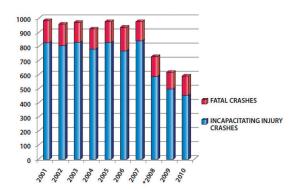
LPA certification session in October so make sure that you register in this session if you are planning on applying for federal funding.

Enjoy the rest of your summer and remember that you can depend on the center's staff for any emerging needs in the transportation area. I am looking forward to seeing you all at our various upcoming training sessions.

# 2012 Wyoming Strategic Highway Safety Plan

The Wyoming Highway Safety Management System (SMS) Committee which consists of state, local, federal, and regional partners has recently updated the Wyoming Strategic Highway Safety Plan (SHSP). This plan will improve communication and coordination of safety efforts throughout the state.

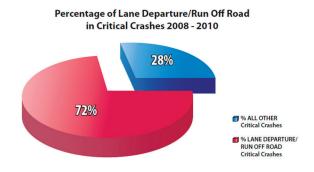
Numerous state and local agencies strive to reduce critical crashes defined as fatal and incapacitating injury. The SHSP will guide current activities and create a future direction for a comprehensive and coordinated approach to improving highway safety by all safety partners in Wyoming. A measure of the success of the efforts will be based on reducing critical crashes on the Wyoming transportation system. The graph below shows the numbers of fatal and incapacitating injury crashes from 2001 to 2010. Safety efforts in Wyoming will be supportive of the National goal to reduce traffic deaths to ZERO, branded as the "Towards Zero Deaths" (TZD) campaign.



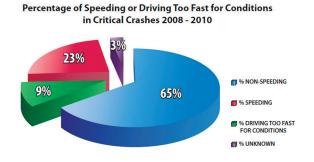
Analysis of Wyoming crash data indicates six areas - Roadway Departure Crashes, Use of Safety Restraints, Impaired Driving, Speeding, Young Drivers and Curve Crashes - represent the greatest opportunities to reduce critical crashes. All individual organizations have specific interest in one or more of these emphasis areas and meeting the goals contained in the SHSP. Furthermore, every effort should be made to

develop partnerships among organizations when there is a benefit to the goal.

Crashes on local governments' roads are similar to the crashes statewide. In other words, the six emphasis areas should be considered seriously by local government officials to improve the safety of the driving public. As shown in the chart below, 72% of all critical crashes in the state are associated with roadway departure. These crashes resulted from driver fatigue, impaired driving, speeding, and distracted driving. While the crash begins with driver error, reductions can often be made by improved delineation, tactile reminders, and a forgiving roadside treatment.



As shown in the chart below, a significant percentage of critical crashes involved speeding. The recent cooperation between locals and WYDOT to establish proper speed limits on local roads should help in reducing these crashes. Critical crashes happen more frequently on some curves than others, and especially more than on straight sections of the highway. The chart on the next page shows the percentage of



# Percentage of Critical Crashes on Curves 2008 - 2010 72% % NOT OCCURRING ON CURVES % OCCURRED ON CURVES

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critical crashes on curves. Providing advanced warning signs on curves can help in reducing such crashes. The recent statewide sign program for local governments should help in providing advanced warning to the driving public.

The SHSP can be implemented through existing safety plans, action plans and through the transportation planning process. All local safety partners should implement the SHSP to the extent that each agency or organization is capable. Implementation can occur at all levels of government from state to local to tribal. The SHSP will continue to support and encourage its local partners to address transportation safety issues in their communities in a proactive manner. Cities and counties face diverse transportation safety issues. It is important to note that some rural communities may face issues related to speeding while urban areas may encounter other

safety problems such as pedestrian and vehicular conflicts at intersections and school safety zones. Despite these differences, local safety efforts should address the goals and objectives of the SHSP. Local governments are encouraged to identify high priority transportation safety issues by analyzing crash numbers, types, and severity of crashes and develop countermeasures to address them. The WYT<sup>2</sup>/LTAP center can help in conducting such crash analyses. Local governments should utilize effective existing safety programs for rural and urban communities in order to address their local safety issues. Safety coordination among locals, state and federal partners will improve transportation safety for the driving public in the State of Wyoming.

The full version of the updated Wyoming SHSP can be viewed on the WYDOT or the WYT<sup>2</sup>/LTAP web site. The center has been working closely with various counties in the state to analyze their crash data and identify low cost safety improvements which will address the six emphasis areas described in the SHSP. You can contact Khaled or Bart at the center if you need help with any safety improvements in your county. Additiohnal details about the Wyoming SHSP can be obtained by contacting Matt Carlson, State Highway Safety Engineer.

# 17th Annual Transportation and Safety Congress

This year's Safety Congress, held at the Parkway Plaza in Casper, kicked off early with two presessions on Tuesday, April 3rd. Local public administrator (LPA) training and certification was conducted; it is mandatory for local agencies spending federal money for their transportation projects. Several instructors from WYDOT presented this workshop. The other pre-session was presented by Pete Anzalone with PubWorks. He went over the basic functionality of the PubWorks maintenance and cost tracking software used by several counties around the state.



This year's Safety Congress was attended by over a hundred people, including 17 different vendors. It began the morning of April 4th with welcomes and introductions. Opening remarks were presented by Del McOmie, WYDOT's chief engineer, David Cough from the FHWA's Wyoming Division office and WACERS president, Gary Korell.

The opening remarks were followed by the presentation of the Roads Scholars and Master Roads Scholars Class of 2012. This year's Roads Scholars were John Canaday, City of Green River, Dave Schlager, Hot Springs County, Mitchell Snyder, City of Laramie, Herbert W. Stoughton, Geodetic Engineer, and Warren Webb, Town of Star Valley Ranch. This year's Master Roads Scholars were Steve Brown, City of Laramie, Rob Fisher, Albany County, Cliff Gibbons, Sweetwater County, and Stephen Monk, City of Green River.



Following the presentation of the Roads Scholars, Cody Beers described processes for highway safety collaboration with WYDOT.

The afternoon consisted of two breakout sessions. One covered federal environmental requirements on transportation projects as mandated by NEPA legislation. It was presented by representatives from the FHWA Resource Center. The other

breakout covered several topics. Steve Monlux, recently retired from the USDA's Forest Service, discussed various methods of stabilizing unpaved roads. Next Josh Jones of the T²/LTAP Center discussed standards for setting speed limits. This was followed by a snow plow policy panel discussion. Panel members were Susan Phillips with Natrona County, Mel Farley with the City of Casper, and Dan Blakeman with the Town of Moorcroft. The afternoon breakout session concluded with a summary of the new edition of the County Road Fund Manual presented by George Huntington of the T²/LTAP Center.

The next morning, after a hearty breakfast, Steve Monlux spoke about optimizing the use of chloride dust suppressants on gravel roads. A panel discussion addressing the use of standard permits and the permitting process on county roads was held. Panelists were Gary Korell with Goshen County, Don Beard with Laramie County, John Radosevich with Sweetwater County, and

Nate Stroud, a research assistant at the University of Wyoming. A second panel discussion addressed issues involving safety on local roads. Panelists were WYDOT's State Highway Safety Engineer, Matt Carlson, Ken Muller with Sheridan County, Don Beard with Laramie County, and Bart Evans of the T<sup>2</sup>/LTAP Center.

The final presentation was given by Barb Sahl, the Wyoming Department of

Environmental Quality's Storm Water Program Coordinator, describing recent changes to storm water construction general permits. Safety Congress wrapped up just before lunch with drawings for door prizes generously donated by our vendors.

WACERS, the Wyoming Association of Count Engineers and Road Supervisors, held a meeting during the afternoon right after Safety Congress.

# SETTING SPEED LIMITS ON LOCAL ROADS IN WYOMING

A new law speed limit law came into effect on July 1, 2011. Title 31, Chapter 5 – Article 3 of the Wyoming Statutes establishes the speed regulations for all public roadways in Wyoming. The limits specified in this subsection established a maximum lawful speed on all Wyoming roads. Any speed limit, other than a statutory speed limit that is posted on a Wyoming road, must follow specific standards developed by the Wyoming Department of Transportation (WYDOT). The following are the statutory speed limits in Wyoming:

- (a) 20 mph in school zones
- (b) 30 mph in urban districts, as defined by W.S. 31-5-102 (a) (lvii)
- (c) 30 mph in any residence district, as defined by W.S. 31-5-102 (a) (xxxviii)
- (d) 30 mph in any subdivision, pursuant to W.S. 18-5-304
- (e) 75 mph on interstate highways
- (f) 65 mph on all other paved roadways
- (g) 55 mph on all other unpaved roadways

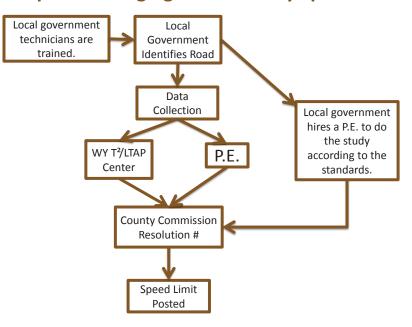
To help counties implement the new law, WYDOT and the Wyoming Technology Transfer Center (WYT²/LTAP) developed standards and guidelines for establishing speed limits on local roads. The following groups provided the necessary feedback for the new standards: WYDOT, local governments at the transportation and safety congress, Wyoming County Commissioners Association (WCCA), Wyoming

Associations of County Engineers and Road Superintendents (WACERS), and the general public. The new standards require a Professional Engineer (P.E.) to sign and stamp each new speed

limit declaration form instead of the WYDOT chief engineer.

According to the new standards, there are two procedures for setting speed limits on local roads in Wyoming: one for paved roads and the second one for unpaved roads. For both procedures, the general steps are the same as shown in Figure 1. When a local government identifies the need for setting a speed limit on a road, a Professional Engineer (P.E.) or a trained county technician can collect the data. Next, a P.E. or the Wyoming T²/LTAP Center should analyze the data and recommend a speed limit. The county commission can then fills out a declaration of speed limit form and include a resolution number so that it can be recorded in the county archives.

# **Steps for Changing the Statutory Speed Limit**



The standards, data collection forms and excel spreadsheets for setting speed limits on paved and unpaved roads can be found on the Wyoming T<sup>2</sup>/LTAP Centers website at:

http://wwweng.uwyo.edu/wyt2/index.php. On the left side of the homepage there is a link that says "Setting Speed Limits". Under that tab, there are four categories: standards, data collection for paved roads, data collection for unpaved roads, and declaration of speed limits forms.

# **Determination of Appropriate Speed Limit**

According to the developed standards, a professional engineer can recommend a speed limit for local roads in Wyoming. The preferred speed limit is the 85th percentile speed rounded to the nearest 5 mph on unpaved roads. A P.E. can consider other roadway characteristics to justify a lower speed limit. The recommended speed limit on unpaved roads shall never be higher than the statutory speed limit of 55 mph. For paved roads, the speed limit shall never be below the 50th -percentile speed or lower bound of the 10-mph pace.

### **Declaration of Speed Limit**

A declaration of speed limit form was developed to help Wyoming local governments store any pertaining documents in their county archives. The declaration of speed limit form is first verified and sealed by a Wyoming P.E. The form, with appropriate background information is then presented to the county commission to approve the proposed speed limit. The resolution number should then be added to the declaration

of speed limit form. The form is then returned to appropriate county officials so that the necessary signing changes can be made. Enforcement of the new speed limit cannot occur until the appropriate signs giving notice of the new speed limit have been erected. Counties can modify this declaration form to fit their local needs. Counties should develop their own systems to record and save all relevant information associated with the speed study and the resolution.

# **Speed Limit Workshop**

Technicians can collect all the necessary data as long as they attend a speed limit workshop. The Wyoming T<sup>2</sup>/LTAP Center will provide training to technicians and engineers on the following dates and locations:

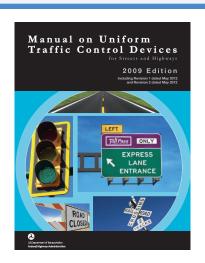
- Riverton October 10, 2012
- Douglas October 11, 2012

If you are satisfied with the statutory speed limits on your local roads, You do not need to do anything. If you believe that the statutory speed are not satisfactory for some of your roads, then you need to follow the developed standards and save the proper documentation for setting an appropriate speed limit.

For more details or help for setting appropriate speed limits on your roads, you can contact Khaled or Josh at the T<sup>2</sup> Center.

# Changes to the MUTCD: Sign Retroreflectivity Compliance Dates & Engineering Judgment and Engineering Studies

On May 14, 2012 in 23 CFR 655, the Federal Highway Administration (FHWA) published final rules to revise the Manual on Uniform Traffic Control Devices (MUTCD) provisions on engineering judgment and studies and on compliance dates for sign retroreflectivity. These changes are referred to as Revision 1 which addresses the use of engineering judgment and engineering studies to modify standards within the MUTCD and Revision 2 which addresses changes to the sign retroreflectivity compliance dates. Links to these revisions and to the relevant



sections of the CFR are available on the current MUTCD website, http://mutcd.fhwa.dot.gov/. This recent online version, not the published, original hard copy 2009 MUTCD, is the legally binding edition.

# **Sign Retroreflectivity: New Compliance Dates** (Revision 2)

The new sign retroreflectivity management compliance dates are presented in the revised 2009 MUTCD as shown in Table I-2. This table in the original 2009 MUTCD had 58 entries; the revised edition has only 12 entries, two of which are shown below. The 46 eliminated compliance dates are no longer applicable.

Thus, the management system for regulatory and warning signs needs to be in place by May 14, 2014. These sign types should be prioritized for replacement by then.

There is no longer a specific date by which a management or assessment method for guide signs, such as street signs, must be implemented. They are to be replaced and upgraded when they reach the end of their useful life.

# Wyoming T<sup>2</sup>/LTAP Center Retroreflectometer Loan Program

The Center has two retroreflectometers available for loan to local agencies. To learn more, contact George Huntington at (307) 766-6783 or georgeh@uwyo.edu.

# **Engineering Judgment and Engineering Studies (Revision 1)**

Prior to the recent changes, an engineering study or engineering judgment could not be used to change standards in the MUTCD. Section 1A.13 of the original 2009 MUTCD stated that: "Standard statements shall not be modified or compromised based on engineering judgment of engineering study." In the new revision, this statement has been removed. Additionally, the following verbiage was added to Section 1A.09 Engineering Study and Engineering Judgment:

### Guidance:

The decision to use a particular device at a particular location should be made on the basis of either an engineering study or the application of engineering judgment. Thus, while this Manual provides Standards, Guidance, and Options for design and applications of traffic control devices, this Manual should not be considered a substitute for engineering judgment. Engineering judgment should be exercised in the selection and application of traffic control devices, as well as in the location and design of roads and streets that the devices complement.

Thus, changes may now be made to the provisions, including standards, of the MUTCD based on engineering judgment or an engineering study.

Table I-2 Target	Compliance Dates	Established by the	FHWA [abridged]

2009 MUTCD Section Number(s)	2009 MUTCD Section Title	Specific Provision	Compliance Date
2A.08	Maintaining Minimum Retroreflectivity	Implementation and continued use of an assessment or management method that is designed to maintain regulatory and warning sign retroreflectivity at or above the established minimum levels (see Paragraph 2)	2 years from the effective date of this revision of the 2009 MUTCD*
6D.03**	Worker Safety Considerations	New requirement in the 2009 MUTCD that all workers within the right-of-way shall wear high-visibility apparel (see Paragraphs 4, 6, and 7)	December 31, 2011

<sup>\*</sup>Types of signs other than regulatory or warning are to be added to an agency's management or assessment method as resources allow.

<sup>\*\*</sup>MUTCD requirement is a result of a legislative mandate.

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Setting Speed Limits October 10 - Riverton October 11 - Douglas

LPA Certification October 23 - Casper

Construction Inspection Nov 13 - Buffalo Nov 15 - Rock Springs

Concrete Workshop Dec 5 - Rawlins Dec 6 - Thermopolis

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Joe Dailey Dave Cough Jeffrey Purdy

The national Local Technical Assistance Program mission is to foster a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision makers.













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