



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

2010: Issue 1

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[www.eng.uwyo.edu/wyt2](http://www.eng.uwyo.edu/wyt2)

## FROM THE DESK OF THE DIRECTOR

By Khaled Ksaibati

A couple of years ago, the center developed and implemented the Wyoming Rural Road Safety Program (WRRSP). Several training sessions were presented around the state to promote safety and to publicize the importance of identifying high risk roadways. The main objective of the WRRSP is to help counties in developing a strategy for improving safety on high risk rural roads. That strategy would include implementing low cost safety improvements which have proved to be effective in reducing crashes and fatalities.

The Wyoming Department of Transportation (WYDOT) and the Federal Highway Administration (FHWA) made safety funding available for counties interested in implementing the WRRSP. So far, the program has been implemented in almost one third of the counties in the state. It is our intention to reach out to all counties interested in implementing the program so that local roads are safer around the state.

Some of the improvements that have been funded in this program included: pavement markings, advance warning signs, delineators, culvert extensions, moving fixed objects from ROW, replacement of cattleguards, guardrail installation, and shoulder extensions.

Laramie County has already implemented the improvements on three roads which were

identified as high risk locations. Gilchrist Road 109-1 is 9.48 miles in length and it is classified as a minor collector. The average daily traffic (ADT) on this road is 257 vehicles per day. It is used for residential access and agricultural activities. The improvements on this road consisted of installing 45 advance warning signs, and three 24-foot cattle guards to reduce the alignment related and overturn crashes.

Durham Road 136-1 is 11.3 miles in length and it is classified as a local road. The ADT on this road is 238 vehicles per day. The improvement on this road consisted of installing 19 advance warning signs to reduce the number of overturn crashes.

Crystal Lake Road 210-1 is 10.80 miles in length and it is classified as a minor collector. The ADT on this road is 173 vehicles per day. The road is used for residential access, recreational purposes, and agricultural activities. The improvements on this road consisted of installing 31 advance warning signs which are needed to reduce alignment-related and overturn crashes.

Don Beard, Laramie County Road and Bridge, participated in every step of the implementation of the WRRSP in Laramie County. The effect of these low cost safety improvements will be investigated by the WY T2/LTAP Center three years from now. A before and after study

will determine the cost effectiveness of the improvements.

If you are interested in improving safety on your county roads, you can contact us at the Center and we will provide you with all the details about the WRRSP. The guide of this program can be found on our web site:

<http://www.eng.uwyo.edu/wyt2/>

If you miss the three rounds of funding for low cost safety improvements, you can still implement

the WRRSP in your county this summer and we will help you in coming up with a strategy to fund some of your low cost safety improvements. The deadline to submit applications for the next round of WRRSP funding is September 1, 2010. For more information about this program, please feel free to contact me or Bart Evans who is our road safety analyst. Let us all make our local roads as safe as they can be.

The pictures below are before and after low cost safety improvements in Laramie County.



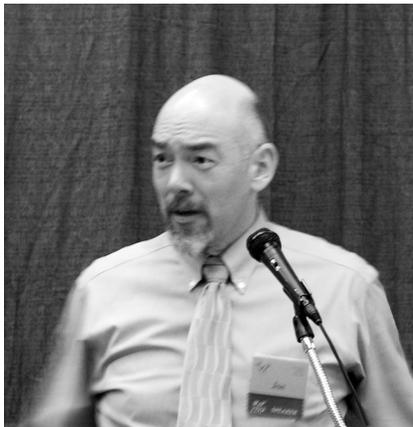
## SAFETY CONGRESS FEATURES BREAKOUT SESSIONS

The 15th Annual Transportation & Safety Congress was held on April 7th and 8th at the Parkway Plaza in Casper. This year's agenda held some surprises for the participants.

Opening remarks were presented by Khaled Ksaibati, the Center's Director.

Del McOmie, WYDOT Chief Engineer, described recent WYDOT studies evaluating the performance of prewetted sand on I-80 between Laramie and Rawlins. WYDOT projects cost savings of about \$80,000 per year for the study area.

Joe Dailey, the new FHWA Wyoming Division Administrator, (pictured at right) described his views on the current political climate in Washington relative to the next transportation bill. He pointed out that no one has a really good idea what will be in the next bill, nor is anyone confident when the next bill will come out, though he pointed out a continuing resolution has extended the SAFETEA-LU legislation through the end of the year.

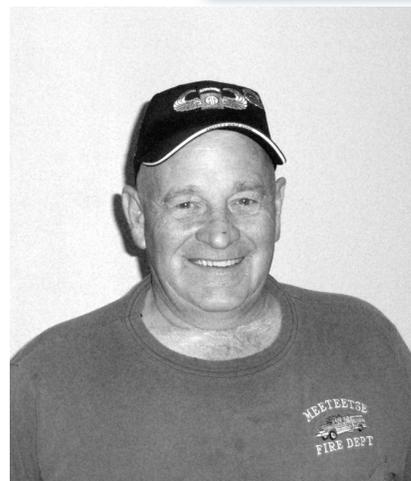


Gary Korell, WACERS President spoke next, followed by the announcement of the "Class of 2009" Master Roads Scholars and Roads Scholars. Those recognized as Master Roads Scholars were Dave Dunbar, Albany County; Gregory Simpson, City of Laramie; and Bobby Welch, City of Green River. These individuals have successfully completed at least 20 WY/T<sup>2</sup> workshops, including at least one Safety Congress and one Work Zone Safety workshop. They each

received a plaque, a mug and a Wyoming clock in recognition of their accomplishments.

Those who were honored as new Roads Scholars were Ruben Garcia, City of Worland; Raymond Richards, Sweetwater County; and Tom Severude, Park County. Roads Scholars must successfully complete at least 12 WY/T<sup>2</sup> workshops, with at least one Safety Congress and one Work Zone Safety workshop. They each received a plaque and a mug in recognition of their accomplishments.

Gregory Simpson



Tom Severude

Matt Carlson, WYDOT Highway Safety Engineer, (pictured on the next page) presented an update on the Wyoming Rural Road Safety Program (WRRSP).



Ray Richards

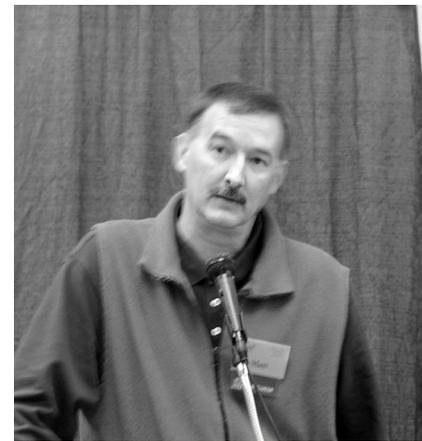
The afternoon session began with a presentation from Duane Keown from the Wyoming Humanities Council. His presentation was entitled "But This is Home: Wyoming, the Energy State".

Following a break, when everyone was able to visit the display booths manned by 16 different exhibitors, the participants were able to choose from a variety of breakout sessions for the remainder of the afternoon. The block of sessions we called "Nuts and Bolts" included three presentations: Ed Woods, Caterpillar, "The New Diesel Emission Standards"; Jerry Durgin, D-Ware, "How to Keep Track of Almost Anything"; and Lee Roadifer, WYDOT, "Advisory Speed Limits on Curves". The second block of breakout sessions, "By the Book", included these three presentations: "Are Your Signs Visible at Night?", Adam Larsen, FHWA; "Sign Management: The Laramie County Experience", Don Beard, Laramie, County; and "Latest Changes to the MUTCD", Adam Larsen, FHWA. All six sessions were very well attended.

The second day began with a presentation by Ron Youngman, Colorado/Wyoming American Concrete Pavement Association, entitled "Concrete Pavement Design and Construction in Our New Economy". He described the current pavement materials economic climate, along with descriptions of some of the recent thin whitetopping concrete paving projects in

Colorado and Wyoming over the past several years and recent concrete pavement design advances.

"Gravel Road Management" was the title of the presentation by George Huntington, WY/T<sup>2</sup>. He described the gravel roads management development project that the Center has undertaken over the past year. He requested that those involved in managing gravel roads or streets review the work so far, particularly the Implementation Guide posted on the Center's website under 'Special Projects' then 'Gravel Roads Management.'



Matt  
Carlson

Lt. Stew Anderson from the Natrona County Emergency Management Office discussed "Disaster: What Are You Going To Do?" with a focus on the role of public works employees in disaster response.

The final presentation was given by Judge Gary Hartman: "Workplace Fatality Prevention". He described efforts to reduce workplace fatalities in Wyoming, and mentioned that a new position in the State's government has been reported, a State Epidemiologist who will be responsible for leading efforts to reduce workplace injuries and fatalities in Wyoming. As you can see, our Safety Congress was a success. The breakaway sessions were received very well so we will have more of them next year. We have started working on topics for next year's Safety Congress so please let us know if you have any specific topic to include in the program.

## LOAN PROGRAMS IN FULL SWING

### Traffic Counters

The Wyoming Technology Transfer Center (WYT<sup>2</sup>) has established a traffic counting program for Wyoming counties. Under this program, the Center provides interested counties with traffic counters and training on how to use these traffic counters. Currently, if a county wants to perform traffic studies or obtain traffic counts off of the



state system, they are limited in their options for the collection of data. By providing the counters through the WYT<sup>2</sup> Center, the counties will have free access to good equipment that will allow them to gather the counts they need. By using the same types of counters throughout the state, the information gathered will be consistent and compatible with WYDOT's new traffic counting software. Counties utilizing the traffic counters will be required to submit the collected data electronically when they return the traffic counters to the Center. These traffic counts will be used to populate a statewide data base.

The Center will take requests from agencies via phone (800-231-2815), fax (307-766-6784), mail or e-mail (mevans2@uwyo.edu), and loan the equipment on a first-come first-served basis.

Agencies will be required to provide an estimated length of use (a maximum of two months) and schedule a return of the equipment. A waitlist is being maintained and the counters will be available to the next agency on the list once they have undergone any required maintenance. The agencies who have already taken advantage of this program include Fremont County, Town of Star Valley Ranch, Wyoming Cooperative Fish and Wildlife, Converse County, Natrona County, Crook County, City of Gurnsey, Goshen County, Hot Springs County, City of Gillette and City of Laramie.

### Retroreflectometers

Agencies are responsible for maintaining their signs to a minimum level of service. A retroreflectometer plays a key role to ensure quality and accuracy when implementing an effective sign management program. To help local agencies who are unable to afford or don't warrant enough need to purchase their own meters, the WYT<sup>2</sup> Center has purchased two retroreflectometers and implemented a loan program. These devices were purchased with 402 Funds from the Wyoming Department of Transportation's Highway Safety Office and the Safety Management System Committee.



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The retroreflectometers are DELTA RetroSign® 4500 Retroreflectometers with GPS capability. Each comes with an extension pole kit to extend the operator's reach an additional nine feet and includes a remote trigger with digital display allowing the operator to take multiple readings without having to retract the pole each time.

The Center takes requests from agencies via phone (800-231-2815), fax (307-766-6784), mail or e-mail (georgeh@uwyo.edu), and loan the equipment on a first-come first-served basis.

Agencies are required to provide an estimated length of use (a maximum of two weeks) and schedule a return of the equipment. A waitlist is being maintained and the equipment will be delivered to the next agency on the list upon its return. The agencies that have already taken advantage of this loan program include City of Laramie, City of Gillette, Big Horn County, Sheridan County, Johnson County, City of Sheridan, Albany County, City of Laramie, City of Powell, Park County, Goshen County and Fremont County.

## HIGHLIGHTS OF THE 2009 EDITION OF THE MUTCD

by Adam Larsen, FHWA

A new edition of the Manual on Uniform Traffic Control Devices (MUTCD) is here! The 2009 MUTCD incorporates more than 500 changes that reflect the advancing state of the art and practice in traffic control devices, as well as successful safety research, new technologies, and important operational strategies such as tolling and managed lanes. The MUTCD is the national standard with which all States and local highway agencies must comply per 23 CFR 655. The Wyoming LTAP has purchased and distributed a copy of the manual for each county and several cities. You can also download a PDF of the 2009 MUTCD from <http://mutcd.fhwa.dot.gov>.

The 2009 MUTCD was published on December 16, 2009, after a nearly two year long rulemaking process. The Federal Highway Administration (FHWA) received over 15,000 comments on proposed changes. Each comment was analyzed and considered by FHWA in making decisions on the content of the 2009 MUTCD.

WYDOT has until 12/16/2011 to adopt the 2009 MUTCD. When WYDOT adopts the manual they may issue a state supplement revising some of the guidance and option statements in the national manual. If WYDOT chooses this action the changes will become state law and will be

applicable to local agencies. If a state supplement is issued, it will be distributed by the Wyoming LTAP/T<sup>2</sup> Center to the counties and major cities who received a copy of the national manual.

Compliance with the 2009 MUTCD is obtained by replacing existing devices or installing new devices that comply with the manual. There are



only 11 new items in the manual that have target compliance dates that agencies should strive to meet. These changes are listed in table I-2 of the manual. Owners of public roads and private roads open to public travel should take steps to update

their policies, practices, standard plans, and other documents to bring them into conformance with the 2009 MUTCD.

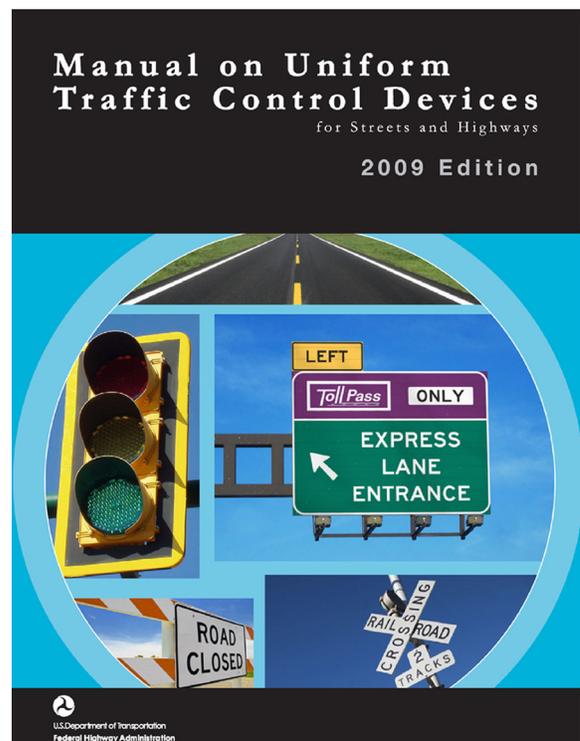
Highlights of the significant changes and additions that are included in the 2009 Edition of the MUTCD are as follows.

- Format, Reference system, and Reorganization of Manual
- Applicability to Private Roads Open to Public Travel
- New Color (Purple) for Toll Facilities
- Florescent Sheeting Specifically Allowed.
- Several New Signs and New Standard Symbols - most notable is the shoulder drop-off symbol.
- Sign Lettering and Legibility - height of lettering has been revised to be 30 feet of legibility for each 1 inch of letter height (20/40 vision)
- Place Names and Destinations Shall Be in Mixed-Case Lettering
- New Provisions for the Establishment of Right-of-Way Control
- Signing and Markings for Roundabouts and Jughandle Intersections
- Revised Requirements for Divided Highway Intersections
- New Pedestrian Pushbutton Symbol and Signs
- Traffic Gates shall have vertical bars not diagonal stripes
- Fluorescent Yellow-Green Color Required for School Warning Signs
- Required Warning Signs for Horizontal Curves
- New Warning Sign Designs
- New Provisions for Background and Legend Colors on Street Name Signs
- Design and Use of Community Wayfinding Guide Signs
- New Chapter for Changeable Message Signs
- Dotted Lane Lines for Non-Continuing Lanes
- Revised Conditions for Providing Marked Crosswalks across Uncontrolled Approaches
- Delineation of Guard Rail and Barriers
- Revised and New Signal Warrants and

### Design Provisions

- Flashing Yellow Arrow for Permissive Turns
- Applicability of Part 5, Low Volume
  - o High-Visibility Apparel Required when working on any public road after 12/31/2011
- New Symbol Design for the School Bus Stop Ahead Warning Sign
- Crossbuck Assemblies and STOP or YIELD sign required at all Passive Rail Crossings

In addition to the major items list above, there are many other changes with which users of the MUTCD should become familiar. The Wyoming T2/LTAP Center is partnering with FHWA to deliver training on the new MUTCD in September 2010. These workshops will be held in Laramie and Riverton on September 13th and 15th, respectively. Brochures will be mailed out five or six weeks before the workshops are scheduled. For assistance with interpreting the MUTCD or proposals to experiment with a device that is not currently in the manual, please contact Adam Larsen with the Federal Highway Administration at 307-772-2101 or [Adam.Larsen@Dot.gov](mailto:Adam.Larsen@Dot.gov).



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### Upcoming Workshops

#### Basic & Advanced Welding

Douglas - July 19 & 20  
Rock Springs - July 21 & 22

#### MUTCD

Laramie - September 13  
Riverton - September 15

#### Winter Maintenance

Buffalo - October 5  
Lander - October 6  
Laramie - October 7

### Wyoming T<sup>2</sup>/LTAP Staff:

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Student Assistants

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#### City Representatives

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Mickey Simmons

#### County Representatives

Joe Evans  
Bill Nation  
Gerald Fink  
Rocky McWilliams  
Don Beard  
Tom Bruce

#### WYDOT Representatives

Tim Hibbard  
Rich Douglass  
Tim McDowell  
Michael Patritch

#### Federal Highway Administration

Philip Miller  
Vern Mickelsen  
Tom Bonds

*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.*

