

# LTAP MATTERS

Montana's Answers To Technical Education of Roads & Streets  
Vol. 29, No. 1

Winter 2012

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**MONTANA**  
STATE UNIVERSITY

Local Technical  
Assistance Program



## From Montana LTAP Director

Safety cannot be enhanced without partnerships. With help from Montana LTAP, local transportation providers can eliminate most safety hazards within the roadway prisms with low-cost safety solutions. These expenses include time and money spent on developing safe clear zones by removing obstacles such as trees, widen shoulders on gravel roads to prevent rollovers, construct and grade roads to keep moisture from gathering and deteriorating the roadway, use of expensive materials to build better roadways, use the safety edge tool to prevent tire scrubbing and over correction.

Unfortunately, studies are showing the public drives faster on these improved roadways and drivers provide their own distractions. Montana State University Professor Nick Ward, and Western Transportation Institute Researcher, presented at the Montana County Road Supervisors Spring Conference 2011 on driver behavior. He indicated 90+% of vehicle accidents involved driver error. Laws regarding cell phone usage can and have been passed because of these indicated statistics.

The Montana LTAP Center conducts Rural Safety Reviews with counties and cities every year to help locals identify and

eliminate hazards on or near the roadway. LTAP provides signing courses to keep signs bright and placed in the correct location. We receive calls constantly asking what sign should be used and how it should be placed.

The LTAP Winter Maintenance course is rehearsed each year to keep our roadways safe through the long Montana winters. Heavy Equipment training offered through LTAP is performed on all pieces of construction equipment to insure operators stay safe as well as those around the operating equipment.

We work closely with our insurance industry to learn

where accident claims come from and how they can be reduced. Worker safety in all its aspects are not only covered in training but Montana LTAP's library is full of personal safety materials for local government agencies that can be self-taught.

A safety culture cannot be achieved from just one agency. It takes Montana LTAP working with all levels of state and local governments, insurance agencies, and the health industry to create an attitude and atmosphere where safety comes first in all our work.

*Travel safe,  
Steve Jenkins, Director* ❖

## 32nd MACRS Spring Conference

This will be the 32nd MACRS (Montana Association of County Road Supervisors) gathering March 26 - 29, 2012 in Great Falls, Montana, at the Heritage Inn. I am honored to be working with a very dedicated MACRS Board of Officers who have provided me support and guidance in preparing an outstanding conference agenda.

Our MACRS mission statement's main emphasis is to share ideas. This is why MACRS Spring Conference is such an important time for many Montana road leaders to gather and share experiences. As we all try to do more with less, communication is key in providing assistance to each other.

Registration brochures for both participants and vendors are available from Montana LTAP. We look forward to another full house and full agenda concentrating on "Operational Policies, Procedures and Permits for County Roads."

*See you there, Mitch Urdahl, MACRS President, Gallatin County*

New MACRS Reps this year: Ovila Byrd, Flathead County; Sandy Broesder, Pondera County Commissioner; and Mo Henman, Yellowstone County.

Other officers include Tom Fairbank, Blaine County; Dave Sutton, Cascade County; Russ Huotari, Richland County; Wayne Buck, Rosebud County; Dave Fowler, Gallatin County; Eric Griffin, Lewis & Clark County. ❖

LTAP Matters is published by the Local Technical Assistance Program. LTAP is located at Western Transportation Institute, College of Engineering, Montana State University, Bozeman, Montana.

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*Front Page Photo: By  
Michele Beck,  
Bozeman Street Scene*

### Local Technical Assistance Program

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Our website lists upcoming training courses, registration forms, library information, our contact information, newsletters, various links, and MACRS information. Please go to:  
<http://www.westerntransportationinstitute.org/centers/ltap/>

The Local Technical Assistance Program/ Tribal Technical Assistance Program (LTAP/ TTAP) is a nationwide network of 58 centers - one in every state, seven serving Native American tribal governments and one in Puerto Rico.

The LTAP/TTAP 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.



# You Show Us Award Winner - Blaine County

At the 26th Annual Regional Local Road Conference held in Rapid City, South Dakota October 2011, Blaine County was awarded the Montana State Award for their Tractor Rear Window Guards entry in the You Show Us Contest.

## Problem Statement:

Blaine County leases tractor mowers for summer and fall to mow roadway shoulders, most of which are on gravel roads. Because of debris, such as rocks, flying up from tires and mower, the rear window was taking a beating and visibility would become limited when grasses would stick to the rear window.

## Discussion of Solution:

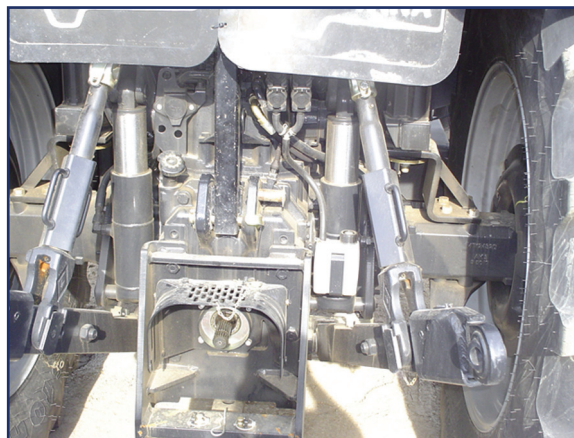
Because the mower tractors are leased, the county did not want to invest in attaching anything permanent to the mower tractor to correct this problem. The solution was to design something removable. After several prototypes were developed, the rear window guard provided a sustainable design. Three point pins are used to attach the guard to the tractor mower. The guard stops rocks and other flying debris from hitting the rear window. To clean the rear window guard, the operator just pulls the top pins and pivots the guard down for ease of wiping off grasses with a rag. The guard can be moved from mower tractor to mower tractor because it is held in place with just the point pins.



Guard Over Rear Window



Guard Dropped Down for Cleaning



Showing Rear Window Guard Pin Connection



Left to Right: Steve Jenkins, MT LTAP Director, presenting award to Tom Fairbank, Blaine County

Rear window guard remains with the county after the leased mower tractor is returned to the tractor company at the end of mowing season.

## Labor, Equipment, and Materials Used

- Approximate shop time to build and weld guard: One person @ \$17 x 5 hours = \$ 85
- Equipment Used: Welder, Chop Saw, Drill

- Material Used: 2" Square Tubing for Main Frame with 1 ¼" square tubing for remaining frame structure, expanded metal, 3 point pins, screws, mud flaps with cost at \$150. Approximate dimensions for this mower tractor rear window guard: 3' High x 5' Wide. Total cost for the project was \$235

## MT LTAP ADVISORY COMMITTEE MEMBERS

The Advisory Board meets annually to make recommendations and evaluate the effectiveness of the Montana LTAP program.

**Russ Albers**  
Chouteau County

**Debbie Arkell**  
City of Bozeman

**Kris Christensen**  
Montana Dept of Transportation

**Thomas Danenhower**  
MMIA

**Kelly Elser**  
Town of Ennis

**Eric Griffin**  
Lewis and Clark County

**Dave Hand**  
Montana Dept of Transportation

**Alec Hansen**  
Montana League of Cities & Towns

(TBA)  
MACo

**Russ Huotari**  
Richland County

**Jim Rearden**  
City of Great Falls

**Bob Seliskar**  
Federal Highway Administration

## Savings and Benefits to Blaine County:

The savings and benefits from this rear window guard include protecting the rear window from flying rocks and debris, protect the operator from broken glass, and not having to replace a broken rear window. Time is saved at the end of the shift by just pulling the pins, lowering the guard, wiping off grasses, cleaning the rear window, and re-pin. The other benefit is removing the guard at the end of the lease when the tractor mower is returned and the guard can be used again for next year's tractor mower.



# Good Results in Bad Times

By Kirk Landers, Reprinted With Permission from Better Roads Magazine

*Pavement preservation expert Larry Galehouse talks about tools and strategies that make sense for surviving the Great Recession.*

"In times like these, the pavement manager's most basic strategy is to keep sound pavements sound and keep bad pavements from becoming unsafe or unusable." So spoke Larry Galehouse, director of the National Center for Pavement Preservation, in an interview with Better Roads.

Indeed, Galehouse, one of the nation's foremost experts on pavement preservation, sees the diminished road budgets of the Great Recession as a litmus test for pavement management strategies.

"The agencies that have pursued the traditional 'worst first' strategy, giving priority to rebuilding bad pavements, are feeling the budget shortfalls most acutely," he notes. "Agencies that have given priority to prevention — to keep good pavements in good condition — are in much better shape."

And that homily is Galehouse's advice to pavement managers dealing with severely constrained budgets. "It costs a lot less to extend pavement life while the pavement is healthy than it does to rehabilitate or rebuild a pavement that has deteriorated too far," he observes.

The key to executing a pavement preservation strategy is to bring the right prevention tool to the right pavement at the right time, he says. The challenge is to select the treatment with the greatest benefit for that particular pavement, and Galehouse notes that it takes a lot of up-front work to make that diagnosis.

"For example," says Galehouse, "you need to identify subsurface failure spots, dig them out and repair them before applying a surface treatment."

And Galehouse stresses that pavement preservation priorities apply to concrete and asphalt pavements alike.

## Asphalt Interventions

One of the least-expensive asphalt pavement treatments that Galehouse often recommends today is the use of a rejuvenator shortly after the surface course is laid. A true rejuvenation of an asphalt surface requires the introduction of maltene fractions. Thus, rejuvenators containing maltenes — the oily, resinous component of asphalt — increase the asphalt binders' resistance to oxidation by improving the chemistry and prolonging its flexibility.

Rejuvenator treatments can be repeated every few years to keep the surface pavement supple and weather-resistant, typically prolonging its life by two to three years. The maltene-based rejuvenator is clear and doesn't affect paint lines.

"It's important to get the true, maltene-based rejuvenator if a change in binder chemistry is desired," says Galehouse, adding that there are many other products on the market. "I suggest getting references from other agencies about how the product worked on past projects," he says.

Rejuvenators are often applied after a road pavement or airport landing strip has been retexturized, says Galehouse. "Today's retexturizing technology is fast and inexpensive, and it improves pavement friction."

The roughened surface accepts the rejuvenator treatment more efficiently and the process improves the tractive qualities of the aggregate. Galehouse warns that pavements with poor-quality aggregate will polish again relatively quickly, while good-quality aggregate will keep its texture for a long time.

## Crack Treatments

As highway agencies have migrated to a prevention-first philosophy of road management, emphasis on crack treatment has grown. The process is inexpensive and has been shown to extend pavement life by two years and often more. Galehouse considers crack treatment an important tool in the pavement manager's toolbox.

"There are two approaches," he says. "Crack sealing is a series of steps that first machines a reservoir in the crack, cleans the reservoir with compressed air, and then fills it with sealant. This approach can be very effective when used on the right pavement at the right time." Galehouse estimates that crack sealing typically extends pavement life at least two to four years.

Crack filling, a process in which debris is blown out of the crack and the crack is filled with sealant, is used for nonworking cracks and wider cracks. Galehouse says crack filling typically adds about two years to the life of a pavement.

"Both of these processes are pothole preventers," he says. "And the longer you can prevent potholes, the longer you can avoid more-expensive interventions like milling and overlays."

## Surface Treatments

Chip sealing has evolved as rapidly as any preservation technology over the past decade, says Galehouse, as contractors and suppliers have stepped up the quality of materials and application techniques. "It's more of a science now," says Galehouse, "though there are still people who don't recognize it as such."

## Asphalt Institute Conference

Sponsored by Asphalt Institute & Montana LTAP

January 31, 2012 • Billings, MT

For Brochure Registration Info: <http://www.westerntransportationinstitute.org/documents/centers/ltap/asphalt2012.pdf>

Or Call: 1-800-541-6631 (MT LTAP)

## Good Results in Bad Times (Cont'd from Page 4)

Perhaps the most dramatic leap forward in chip sealing will be offered through the SHRP2 (Strategic Highway Research Project) Project R-26 in which chip seals with carefully selected aggregate and emulsion applied with precise construction technique and finished with a fog seal can be placed on high-volume roads. This will finally demonstrate that chip seals can perform excellently on high-volume roads when care is taken in design and construction, says Galehouse. (*Access to SHRP2 Project R-26 at this site: <http://www.trb.org/Main/Blurbs/165533.aspx>*)

“A high-quality chip seal applied to a sound pavement prevents sunlight and water from destroying the pavement,” says Galehouse. “It also adds macro-texture to the road surface to enhance traction, and with a fog seal it provides more visibility to paint markings by improving contrast.”

Other surface treatment interventions include slurry sealing and microsurfacing. Slurry seals are a mixture of fine aggregate, emulsified asphalt, water and additives placed by special machines in a thin coat, one stone thick. The slurry seal fills hairline cracks and delays pavement oxidation, and is appropriate for urban/suburban neighborhood roads in good condition.

Microsurfacing is a slightly thicker intervention than the slurry seal, combining polymer-modified asphalt emulsion, crushed aggregate, water and other additives in a carefully specified mix design, and placed by specialized equipment.

“Microsurfacing adds thickness to the pavement structure, so it can correct rutting and minor raveling, and improve friction,” says Galehouse. “It is also designed to stand up to high-traffic volumes and heavy loads.”

### Overlays

The next stop on the prevention continuum for asphalt pavements is the ultra-thin overlay — typically, 3/4-inch thick or less. “This is an intervention for a sound pavement,” says Galehouse. “With the advances in mix design and placement practices, it has become a very effective tool. It protects the surface of the original asphalt, fills minor imperfections, and improves ride quality.”

Ultra-thin overlays can also be designed to deliver other benefits. Use of a rubberized asphalt binder, for example, can mitigate traffic noise with great effectiveness. An open-graded friction course design can reduce spray during rain and enhance the quality of runoff water.

Thin overlays — up to 1.5 inches in thickness — cost more, but by virtue of their thickness can smooth out deeper imperfections, and achieve greater smoothness that improves the ride quality of the pavement.



Milling is the tool when the surface pavement has deteriorated beyond the point where lesser interventions can restore its condition. Milling is also employed in metropolitan areas where a simple overlay will not align properly with gutters.

“This is the Cadillac fix in the prevention tool box,” says Galehouse. “You mill off a thickness of deteriorated pavement and overlay with new asphalt to restore the ride quality. It’s a lot cheaper than waiting until you have to do a total structural rehabilitation, but for stretching budget dollars, you want to work as far up the deterioration curve as possible.”

In-place recycling technologies can also be very effective in treating aging pavements, says Galehouse. “It’s important to make sure the project you have in mind is a good fit for the technology, whether it’s hot-in-place or cold-in-place,” says Galehouse. “The best procedure is to get a good, reputable contractor to evaluate the project in terms of its appropriateness for (either).”

When in-place recycling technologies are viable, they bring a cost advantage to the project as well as environmental advantages, such as less energy consumption, lower CO2 emissions, and a 100-percent recycling of the existing resource.

### Concrete Pavement Interventions

Contractors and pavement managers have developed an elaborate toolbox for concrete pavement prevention, notes Galehouse.

Joint resealing lies at the low end of the cost spectrum, followed by diamond grinding and partial and full-depth repairs.

“Cost analysis is key, especially with the more-expensive interventions” says Galehouse. “You have to weigh the cost of repair against the cost of replacement. So, for example, if you had to replace every other panel on a stretch of road, it would probably make much more sense to just replace that stretch of road.”

In many cases, says Galehouse, concrete pavements just need diamond grinding to remove surface imperfections and improve smoothness. Over a period of time, concrete slabs can settle due to movement of the road’s subbase. Most of the imperfections occur where the panels abut.

“If you have vertical displacement – called faulting – of the slabs, you might consider retrofitting dowel bars to stabilize the joint and improve the transfer of loading between slabs,” says Galehouse. “If they are tied together, just diamond grind it and seal the joint.”

*Continued on Page 8...*

# Calendar of Events • January 2012 - June 2012

## January 2012

S	M	T	W	Th	F	S
1	②	3	4	5	6	7
8	9	10	11	12	13	14
15	①⑥	①⑦	18	19	20	21
22	②③	②④	②⑤	②⑥	27	28
29	30	③①				

- 2: New Year's Holiday - Offices Closed  
 16: Martin Luther King Day - Offices Closed  
 17: **MT LTAP Safety Webinar - Leadership - 7:30am-8:30am**  
 22-26: Transportation Research Board, Washington, DC  
 23-26: **10th Annual Safety Congress - Great Falls, MT (MT LTAP):**  
     23 am: **Work Zone Tech**  
     23 pm & 24: **Traffic Control Supervisor**  
     25 am: **Signing/Prisms/Clear Zones**  
     25 pm: **Safety Audits**  
     26 am: **Sign Retroreflectivity/Driving Behavior**  
     26 pm: **Worker Safety**  
     23-25: **IMS Certification - Contact MT LTAP**  
 31: **Asphalt Institute, Billings, MT (MT LTAP)**

## February 2012

S	M	T	W	Th	F	S
			1	2	3	4
5	6	⑦	⑧	9	10	11
12	13	14	15	①⑥	17	18
19	②⑩	②①	22	23	24	25
26	27	28	29			

- 7-8: **FREE OSHA-10 Hour Safety Course, Heritage Inn, Great Falls, MT (Hosted by Montana LTAP)**  
 12-16: ATSSA Convention & Traffic Expo [www.TrafficExpoTampa.com](http://www.TrafficExpoTampa.com)  
 13-16: MACo's Midwinter Conference  
     Billings Hotel & Convention Center, Billings, MT  
 16: **EDC-Every Day Counts-Exchange Live Webinar FHWA/MDT/MTLTAP 11am - 2pm**  
 20: President's Day - Observed (Montana LTAP Offices Open)  
 21: **MT LTAP Safety Webinar - Back Safety & Slips, Trips, & Falls 7:30am-8:30am**  
 27 - March 2: **SafetyFestMT - Billings Hotel & Convention Center, Billings, MT**  
[www.safetyfestmt.com](http://www.safetyfestmt.com)

## March 2012

S	M	T	W	Th	F	S
				1	2	3
4	5	⑥	⑦	⑧	9	10
11	12	⑬	⑭	⑮	⑯	17
18	19	⑳	21	22	23	24
25	②⑥	②⑦	②⑧	②⑨	30	31

- Feb 27 - March 2: **SafetyFestMT - Billings Hotel & Convention Center, Billings, MT** [www.safetyfestmt.com](http://www.safetyfestmt.com)  
 6: **Work Zone Tech Course - Helena (MT LTAP)**  
 7: **Work Zone Tech Course - Missoula (MT LTAP)**  
 8: **Work Zone Tech Course - Kalispell (MT LTAP)**  
 10-18: MSU Spring Break  
 13: **Flagging Certification Course - Miles City (MT LTAP)**  
 14: **Flagging Certification Course - Glendive (MT LTAP)**  
 15: **Flagging Certification Course - Wolf Point (MT LTAP)**  
 16: **Flagging Certification Course - Plentywood (MT LTAP)**  
 20: **MT LTAP Safety Webinar - Culverts/Trenching - 7:30am-8:30am**  
 26-29: **MACRS 31st Annual Conference Heritage Inn, Great Falls, MT (MT LTAP)**

## April 2012

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	⑨	⑩	⑪	⑫	13	14
15	16	⑰	18	⑱	20	21
22	23	24	②⑤	②⑥	27	28
29	30					

- 1-5: NACE 2012, Lexington, KY [www.naco.org](http://www.naco.org)  
 9-10: **Gravel Roads - Missoula (MT LTAP)**  
 11-12: **Gravel Roads - Kalispell (MT LTAP)**  
 17: **MT LTAP Safety Webinar - Work Zones - 7:30am-8:30am**  
 19: **EDC-Every Day Counts-Exchange Live Webinar 11am - 2pm FHWA/MDT/MTLTAP**  
 25-26: **Gravel Roads - Sidney (MT LTAP)**  
 23-27: **National Work Zone Awareness Week (FHWA)**

**Training Opportunities at Montana LTAP Website:**  
[www.westerntransportationinstitute.org/centers/ltap/](http://www.westerntransportationinstitute.org/centers/ltap/)

## May 2012

S	M	T	W	Th	F	S
		1	2	3	4	5
6	7	⑧	9	10	11	12
13	14	⑮	⑯	⑰	18	19
20	21	22	23	24	25	26
27	②⑧	29	30	31		

- 8: **MT LTAP Safety Webinar - Materials - 7:30am-8:30am**  
 15: **Work Zone Flagging Course - Great Falls (MT LTAP)**  
 16: **Work Zone Flagging Course - Lewistown (MT LTAP)**  
 17: **Work Zone Flagging Course - Billings (MT LTAP)**

- 28: Memorial Day - Offices Closed  
 30 & 31: **LTAP Region 7 Meeting - Denver, CO**

**Some dates and locations are subject to change.  
 Call Genevieve Albert, LTAP, 1-800-541-6671 to confirm.**

## June 2012

S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	⑪	⑫	⑬	14	15	16
17	18	⑰	20	⑲	22	23
24	25	26	27	28	29	30

- 11: **Work Zone Flagging Course - Bozeman (MT LTAP)**  
 12: **MACRS Executive Meeting - Bozeman**  
 13: **Montana LTAP Annual Advisory Board Meeting - Bozeman**  
 19: **MT LTAP Safety Webinar - Summer Survival - 7:30am-8:30am**  
 19: **EDC-Every Day Counts-Exchange Live Webinar 11am - 2pm FHWA/MDT/MTLTAP**

### Safety Meeting Webinars from Montana LTAP

- January 17, 2012 - Leadership  
 February 21, 2012 - Back Safety & Slips, Trips, Falls  
 March 20, 2012 - Culvert Placement & Trenching Safety  
 April 17, 2012 - Work Zones  
 May 8, 2012 - Materials  
 June 19, 2012 - Summer Survival

Monthly Thirty-Minute Safety Webinars held at 7:30am on Tuesday Mornings  
 Call Montana LTAP at 1-800-541-6671 for more information!

# Calendar of Events • July 2012 - December 2012

## July 2012

S	M	T	W	Th	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

4: Fourth of July Holiday - Offices Closed

30-Aug.2: National LTAP/TTAP Conference, Grapevine, TX

*Training on Request:*

*Summer Survival  
Hand Safety  
Slips, Trips, & Falls*

## August 2012

S	M	T	W	Th	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

July 30-Aug.2: National LTAP/TTAP Conference, Grapevine, TX

**16: EDC-Every Day Counts-Exchange Live Webinar 11am - 2pm**  
**FHWA/MDT/MTLTAP**

26-29: APWA International Public Works Congress & Exposition, Anaheim CA. Go to this link: <http://www2.apwa.net/events/>

*Training on Request:*

*Forklift  
Sign Safety  
Road Audits*

## September 2012

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

3: Labor Day Holiday - Offices Closed

**5&6: Tentative Dates - 23rd Annual Equipment Safety Training and Snow Rodeo - Billings, MT (MT LTAP) Brochure available in July**

23-27: MACo 103rd Annual Conference, Heritage Inn, Great Falls, MT  
[www.mtcounties.org](http://www.mtcounties.org) or MACo's Karen Houston 406-449-4360

## October 2012

S	M	T	W	Th	F	S
			3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

**TBA: MACRS Fall District Meetings**

**3-5: 81st League of Cities & Towns - Hilton Garden Inn, Kalispell, MT**  
**3: Public Works Directors - MT LTAP**

TBA: Put On The Brakes Day - 12th Anniversary (go to: [www.brakesonfatalities.org](http://www.brakesonfatalities.org))

8: Columbus Day - Observed (Montana LTAP Offices Open)

**TBA: MT LTAP Safety Webinar 7:30am-8:30am**

TBA: 27th Regional Local Road Coordinators Conference, Rapid City, SD

## November 2012

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

6: Election Day (Offices Closed)

12: Veterans' Day - Offices Closed

**13 & 14: MACRS Planning Meeting, Heritage Inn, Great Falls, MT**

**TBA - MT LTAP Safety Webinar - 7:30am - 8:30am**

22 - 23: Thanksgiving Holiday - Offices Closed

## December 2012

S	M	T	W	Th	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

**TBA - MT LTAP Safety Webinar -7:30am-8:30am**

24 & 25: Christmas Holiday - Offices Closed

*Training on Request:*

*Winter Survival  
Winter Maintenance*

Some dates and locations are subject to change.

Call Genevieve Albert, LTAP, 1-800-541-6671 to confirm.



# Hand-Held Cell Phone Ban by Drivers of Buses & Large Trucks

The joint rule from the Federal Motor Carrier Safety Administration and the Pipeline and Hazardous Materials Safety Administration went into effect January 3, 2012. The final rule prohibits commercial drivers from using a hand-held mobile telephone while operating a commercial truck or bus. Drivers who violate the restriction will face federal civil penalties of up to \$2,750 for each offense and disqualification from operating a commercial motor vehicle for multiple offenses.

In November 2011, a news release from U.S. Transportation Secretary LaHood announced a final rule specifically prohibiting interstate truck and bus drivers from using hand-held cell phones while operating their vehicles. The joint rule from the Federal Motor Carrier Safety Administration (FMCSA) and the Pipeline and Hazardous Materials Safety Administration (PHMSA) is the latest action by the U.S. Department of Transportation to end distracted driving.

“When drivers of large trucks, buses and hazardous materials take their eyes off the road for even a few seconds, the outcome can be deadly,” said Transportation Secretary Ray LaHood. “I hope that this rule will save lives by helping commercial drivers stay laser-focused on safety at all times while behind the wheel.”

Additionally, states will suspend a driver’s commercial driver’s license (CDL) after two or more serious traffic violations. Commercial truck and bus companies that allow

their drivers to use hand-held cell phones while driving will face a maximum penalty of \$11,000. Approximately four million commercial drivers would be affected by this final rule.

Nearly 5474 people died and half a million were injured in crashes involving a distracted driver in 2009. Distraction-related fatalities represented 16 percent of overall traffic fatalities in 2009, according to National Highway Traffic Safety Administration (NHTSA) research.

Many of the largest truck and bus companies, such as UPS, Covenant Transport, Wal-Mart, Peter Pan and Greyhound already have company policies in place banning their drivers from using hand-held phones.

Go to this site for more information: <http://www.fmcsa.dot.gov/>

## Montana Cities Banned Use of Hand-held Phones While Driving:

- Bozeman
- Billings
- Butte
- Helena
- Whitefish

*In 2009, almost 100 Montana traffic-related deaths were linked to cell phone use by drivers.*

Check out the Governors Highway Safety Association site outlining all state cell phone and text messaging laws. Some local jurisdictions may have additional regulations: [http://www.ghsa.org/html/stateinfo/laws/cellphone\\_laws.html](http://www.ghsa.org/html/stateinfo/laws/cellphone_laws.html)

## Good Results in Bad Times (Cont’d from Page 5)

While some pavement managers aren’t convinced that joint sealing improves concrete pavement performance, Galehouse does advocate the practice.

“The important thing is to keep the incompressibles out of the joint,” he says. Incompressibles include foreign objects that can clog joints and prevent the slabs from flexing as temperatures change and cause the panels to expand and contract. “By keeping joints sealed, you keep out the material that can cause blow-ups,” says Galehouse. “Seals also help protect the pavement from water seeping into the base and creating a ‘pumping’ action that forms voids in the subbase and cause cracks and even breaks in the panel.”

Joint seals typically last 10 to 12 years before leaks appear, says Galehouse.

Does prevention pay off with concrete roads? “If we take good care of our concrete roads with the tools we have today,” says Galehouse, “they will last far beyond what we have come to expect — over 50 years for good concrete.”

### Coping with Our Times

There are still pavement managers in America who give their worst pavements first priority in budgeting, Galehouse notes, and their systems are suffering the most from the diminished budgets of the Great Recession.

“In good times or bad, the strategy that makes the most sense is to first keep your good pavements good — your dollars go further and your system stays stronger,” says Galehouse. “Then you keep your marginal pavements from deteriorating any further — to minimize safety concerns and the cost of the ultimate repair. And then you rehabilitate bad pavements as dollars allow, starting with safety concerns.”

Galehouse concedes that today’s tight budgets constrict everyone, but those pursuing sound management strategies that stress prevention will outperform the others, he says.

“Agencies that follow an asset management approach will come out of this cycle in good shape,” he concludes.

### Larry Galehouse

Larry Galehouse is a licensed professional engineer and a licensed professional surveyor. His experience includes tenure with an engineering consulting firm and with a large state DOT. In 2003, he helped found the National Center for Pavement Preservation located at Michigan State University in Lansing, Mich. Galehouse has been a leader in pavement preservation initiatives within AASHTO, NACE, FHWA and TRB. Contact and learn more about the National Center for Pavement Preservation at

<http://www.pavementpreservation.org/>



# About Every Day Counts

Victor Mendez,  
 FHWA Administrator  
 Obtained from the EDC website  
 at <http://www.fhwa.dot.gov/everydaycounts/about/>:

Our society and our industry face an unprecedented list of challenges. Because of our economy, we need to work more efficiently. The public wants greater accountability in how we spend their money. We need to find ways to make our roads safer. And we have an obligation to help preserve our planet for future generations.

But it's not enough to simply address those challenges. We need to do it with a new sense of urgency. It's that quality—urgency—that I've tried to capture in our initiative, Every Day Counts (EDC).

EDC is designed to identify and deploy innovation aimed at shortening project delivery, enhancing the safety of our roadways, and protecting the environment.

These goals are worth pursuing for their own sake. But in challenging times, it's imperative we pursue better, faster, and smarter ways of doing business.

EDC is designed to focus on a finite set of initiatives. Teams from the Federal Highway Administration will work with our state, local, and industry partners to deploy the initiatives and will develop performance measures to gauge their success.

The first round of initiatives described (on EDC website)

represent what I hope will lead to a sea change in the way we deploy innovation. As you see represented in the EDC logo, our industry is shaped by invention, ingenuity, imagination, and innovation. These words are not new to the transportation community's lexicon. They've always been at the heart of our work.



But under Every Day Counts, I want to see us work together to bring more focus and commitment to those qualities, and to the rapid deployment of proven solutions and technologies that make a difference. The traveling public deserves no less.

Secretary LaHood has set the bar high at USDOT. He not only expects us to think innovatively, he understands the times demand it. Every Day Counts is FHWA's effort to provide National leadership in the quest to meet the transportation demands of the 21st Century. ❖

## Every Day Counts Dynamic Webinars

Montana LTAP in conjunction with Montana FHWA and Montana Department of Transportation will continue announcing to local governments access to dynamic webinars via listservs, webpage calendar, and brochure notices.

The first Dynamic Webinar Topic was on Construction Manager/General Contractor, held on December 15, 2011. MDT provided eleven sites in Montana.

A dynamic webinar uses the availability of projecting the presentation from a set site to other designated conference rooms across the state and nation where local discussion occurs after each segment is presented. The end product is having local, state, and federal stakeholders come together to share ideas on the subject matter.

The next EDC Dynamic Webinar on Geosynthetic Reinforced Soil (GRS)/Integrated Bridge system (IBS) technology is being held February 16, 2012, at the various MDT sites listed in the chart below:

Instead of conventional bridge support technology, Geosynthetic Reinforced Soil (GRS) Integrated Bridge System (IBS) technology uses alternating layers of compacted granular fill material and fabric sheets of geotextile reinforcement to provide support for the bridge. GRS also provides a smooth transition from the bridge onto the roadway, and alleviates the "bump at the bridge" problem caused by uneven settlement between the bridge and approaching roadway. The technology offers unique advantages in the construction of small bridges, including:

- Reduced construction time and cost, with costs reduced 25 to 60 percent from conventional construction methods.
- Easy to build with common equipment and materials; easy to maintain because of fewer parts.
- Flexible design that's easily modified in the field for unforeseen site conditions, including unfavorable weather conditions.

If you want to receive notifications and be on Montana LTAP's listserv, please contact us at 1-800-541-6671. This information is also available on MT LTAP's website at: <http://www.westerntransportationinstitute.org/centers/ltap/training/calendar> ❖

Area	Contact (front desk) #	ROOM	Time	Exchange #2	Exchange #3	Exchange #4	Exchange #5
Billings	406-252-4138	MDTCNF Billings Conference Room	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012
Glendive	406-345-8200	MDTCNF Glendive Conference Room	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012
Great Falls	406-454-5880	MDTCNF Great Falls Const Conference	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012
Lewistown	406-538-1300	MDTCNF Lewistown Conference Room	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012
Miles City	406-233-2600	MDTCNF Miles City Conference Room	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012
Wolf Point	406-653-6700	MDTCNF Wolf Point Conference Room	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012
Havre	406-262-5500	MDTCNF Havre Conference Room	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012
Milssoula	406-523-5800	MDTCNF Missoula Conference Room	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012
Kalispell	406-751-2000	MDTCNF Kalispell Upstairs Conference Room	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012
Helena	406-444-6200	MDTCNF 2nd Floor West	11:00-2:00	2/16/2012	4/19/2012	6/21/2012	8/16/2012

## Montana LTAP Library

Welcome to the LTAP Lending Library where publications, videos, DVD's, and software may be borrowed for a two-week period. We have a limit of three videotapes or DVD's for a rent-free two-week period. Some publications are free or for a nominal charge upon request.

For information or checkout procedures, please call Genevieve Albert or Michele Beck, LTAP, 1-800-541-6671. If you have computer access, please e-mail us: [mtltap@coe.montana.edu](mailto:mtltap@coe.montana.edu).

### New Publications

#### **p-265 Falling Weight Deflectometer Calibration Center and Operational Improvements: Redevelopment of the Calibration Protocol and Equipment (FHWA Oct 2011)**

This report details the critical updates to the Strategic Highway Research Program falling weight deflectometer (FWD) calibration procedure. This has led to the revision of the American Association of State Highway and Transportation Officials R32-09 calibration procedure. (268 pages) *Available Online*

#### **p-382 LTPP Computed Parameter: Dynamic Modulus (FHWA September 2011)**

The dynamic modulus,  $|E^*|$ , is a fundamental property that defines the strain response characteristics of asphalt concrete mixtures as a function of loading rate and temperature. The dynamic modulus,  $|E^*|$ , is a fundamental property that defines the strain response characteristics of asphalt concrete mixtures as a function of loading rate and temperature. Given the significance of  $|E^*|$ , this study evaluated existing prediction models, developed new models, and populated the Long-Term Pavement Performance database to provide a valuable data source for the pavement community. Supplementing the full suite of material properties, performance history, traffic, and climate with  $|E^*|$  estimates will be advantageous in conducting MEPDG calibration, validation, and implementation. (263 pages) *Available Online*

#### **p-383 Impact of Design Features on Pavement Response and Performance in Rehabilitated Flexible and Rigid Pavements (FHWA Oct 2011)**

The primary focus of this research was to determine the effects of design and construction features, such as overlay thickness and mix type, presence of milling, and type of restoration, on pavement response and performance and to establish their importance in the prediction of future performance of rehabilitated pavements. (261 pages) *Available Online*

#### **p-661 Maintenance of Drainage Features for Safety - A Guide for Local Street and Highway Maintenance Personnel (FHWA July 2009)**

This guide, which is an update to the same titled guide published in 1990, is intended to help local agency maintenance workers ensure their agency's signs are maintained to meet the needs of the road user. The guide succinctly covers the following topics: a description of sign types, sign materials and sign supports; sign installation and the elements of a sign management system including inventory, inspection, preventive maintenance, repair and replacement, and recordkeeping. (38 pages) *Available Online*

We have new lists for the library publications, software, DVD's, and videos at our new web site:

<http://www.westerntransportationinstitute.org/centers/ltap/Resources>

At this web site, you can also keep track of upcoming workshops, past and present newsletters, and workshop announcements. Our 2011 Needs Assessment Survey is available at this web site. Thank you in advance for taking time to complete it.

#### **p-796 Safety Evaluation of the Safety Edge Treatment (FHWA April 2011)**

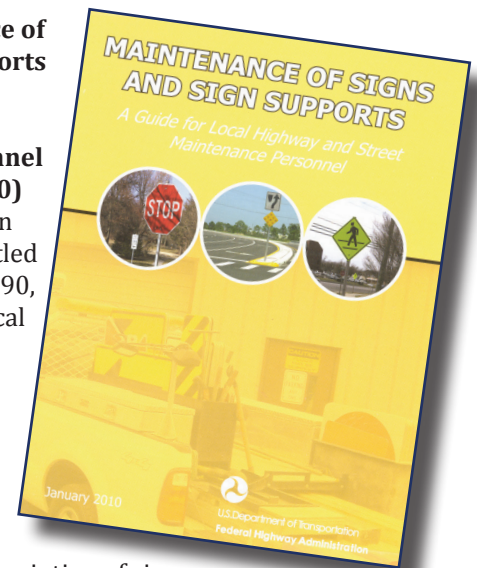
This report examines the safety effects, costs, and benefits of this low-cost treatment for two-lane and multilane rural highways. The safety evaluation found that the safety edge treatment appears to have a small positive crash reduction effect. (95 pages) *Available Online*

#### **p-796A Safety Evaluation of the Safety Edge Treatment - Summary Report (FHWA April 2011)**

Benefit-cost analysis based on the estimated 5.7 percent crash reduction effectiveness of the safety edge treatment found that this treatment is so inexpensive that it is highly cost-effective for application in a broad range of conditions on two-lane highways. (8 pages) *Available Online*

#### **p-1006 Maintenance of Signs and Sign Supports - A Guide for Local Highway and Street Maintenance Personnel (FHWA January 2010)**

This guide, which is an update to the same titled guide published in 1990, is intended to help local agency maintenance workers ensure their agency's signs are maintained to meet the needs of the road user. The guide succinctly covers the following topics: a description of sign types, sign materials and sign supports; sign installation and the elements of a sign management system including inventory, inspection, preventive maintenance, repair and replacement, and recordkeeping. (58 pages) *Available Online*



#### **p-1024A FHWA Retroreflective Sheeting Identification Guide (FHWA 2011)**

This document is intended to help identify sign sheeting materials for rigid signs and their common specification designations. It is not a qualified product list. FHWA does not endorse or approve sign sheeting materials. Many other sheeting materials not listed here are available for delineation and construction/work zone uses. (2-sided document) *Available Online*



## New Publications (Cont'd)

**p-1400 Technological Innovations in Transportation for People with Disabilities Workshop Summary Report (FHWA September 2011)** The objectives of the February 2011 workshop were to identify areas of focus where research could lead to radical new approaches in personal mobility, and assess technological viability and capabilities. (36 pages) *Available Online*

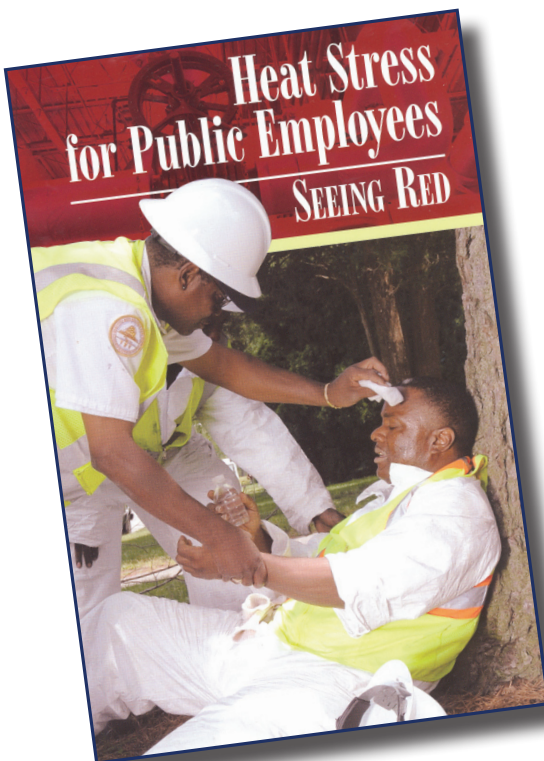
**p-2047 NCHRP Report 350 Crash Testing and Evaluation of the S-Square Mailbox System (January 2010) Research/Test Report 0-5210-7** Texas DOT desired to evaluate an alternate mailbox support system for use in Texas. The S-Square Tube Products mailbox system successfully passed all requirements of NCHRP Report 350 and is considered ready for field implementation in single, dual, and multiple mailbox configurations. (80 pages) *Available Online*



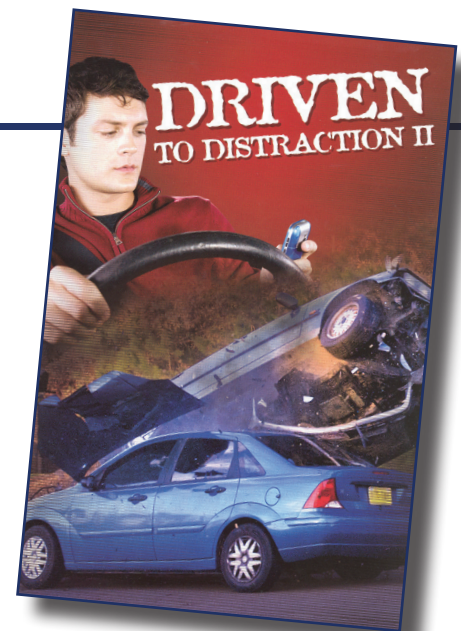
**p-2444 Customer Driven Service – Learner’s Guide (RTAP – June 2011)** This guide focuses on teaching transit staff that interact with customers the importance of customer service, as well as providing them with the tools and training they need to provide excellent customer service regardless of the situation or who the customer may be. This learner’s guide offers fast facts, best practices, exercises, quizzes and other guidelines to help drivers, dispatchers and other transit staff cultivate the best attitude for truly excellent customer service. (26 pages plus CD) *Available Online*

## New DVDs

**DVD 814 Heat Stress for Public Employees – Seeing Red (Coastal 2008)** Heat stress, heat stroke, heat rashes, heat cramps – all are dangerous to your employees. This training DVD will give them the knowledge they need to avoid the dangers of working in hot, humid conditions: Acclimatization, Hydration, Proper Clothing, Signs of heat fatigue (14 mins)



**DVD 859 Driven to Distraction II (Coastal 2010)** Driven To Distraction 2, shows us where our vulnerabilities lie. It covers some of the newer ways we distract ourselves while driving including texting, tweeting, and GPS. Of course, the old ones are there too. If you are concerned about your employees being distracted behind the wheel, you will find there is a lot to learn from Driven To Distraction 2. Help raise awareness of this dangerous practice among your employees with this high-impact training DVD. (20 mins.)



**DVD 2005 Median Barriers & Rumble Strips (FHWA 2011)**

- Median Barriers, including guardrails, covers the three types of median barriers. (16 minutes)
- Rumble Strips includes rumble stripes and the value of safety they add to the roadway in preventing crashes. (37 minutes)

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LTAP welcomes contributions to **LTAP MATTERS**. Those wishing to submit relevant material to be published in the next newsletter can submit their ideas and articles to:

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**LTAP MATTERS** is published quarterly. Funding for this program is provided by the Federal Highway Administration, Montana Department of Transportation, Montana State University, and a portion of Montana's gas tax revenues.

This newsletter is designed to keep you informed about new publications, techniques, and new training opportunities for you and your community.

Present and past issues are available at <http://www.westerntransportationinstitute.org/centers/ltap/Newsletter> or by calling 1-800-541-6671.

Approximately 700 copies of this public document were published at an estimated cost of \$1.95 per copy for a total cost of \$1,362.83 which includes \$1,031.99 for printing and \$330.84 for distribution.

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Please send us any comments or concerns you may have regarding this newsletter with your name and address in order that we may respond in a timely manner.