THE MILEPOST

THE QUARTERLY NEWSLETTER FOR THE NEVADA LTAP CENTER JULY 2013

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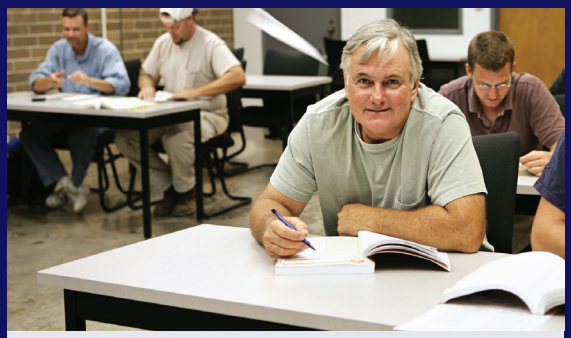


Upcoming workshops

Workshops are held in Carson City, Elko, Eureka, Las Vegas, Reno and Winnemucca. New workshops are added all the time. To view our most up-to-date schedule, visit http://www.tmcc.edu/ltap or call (775) 829-9046 for details. The following topics will be offered this spring and summer:

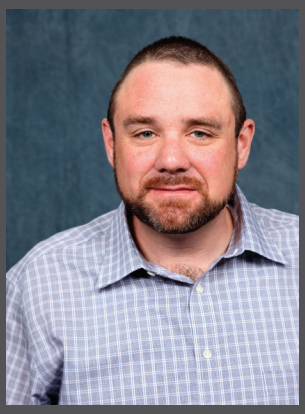
- **Tort Liability and Risk Management**
- **Basic Computer Skills for Transportation Workers**
- **Asphalt Pavement Rehabilitation: Overlays and In-place Reclamation**
- **Basic Computer Skills**
- **Pavement Distress Evaluation and Maintenance Treatment Selection**
- **Summer Survival**
- **Design, Construction and Maintenance of Gravel Roads**

We are developing a workshop on Construction Management for Rural Projects for this fall. Rural projects are defined as those costing less than $2 million or populations less than 50,000.

Contact us at (775) 829-9046 if you would like a workshop brought to you.

Find the transportation resources you need at the NDOT Research Library

LTAP has partnered with the NDOT Research Library to provide you with the latest resources in your industry. The NDOT library contains nearly 20 thousand volumes covering the entire spectrum of transportation subjects, and its librarian, Mitch Ison looks forward to assisting you with your informational needs.



Highlights of this collection include Transportation Research Board publications, titles published by the American Association of State Highway and Transportation Officials, the National Cooperative Highway Research program and the Transit Cooperative Research Program. You can access information via the online catalog and through links to free online resources. In addition, the library subscribes to more than 75 magazines and journals: a full list of titles can be found on the library's website. In the future, Ison plans to expand content through additional subscriptions to databases along with the introduction of ebook subscriptions. He also plans to revamp the library's website with relevant links to help guide researchers to the very best of the vast government and nonprofit resources available for free on the Internet.

Ison, the new librarian at this facility, is passionate about helping you find the information you need to have your project succeed. Although transportation is a new discipline for him, he's looking forward to making his own mark on this facility. Ison's goal is to make the NDOT Research Library the leader in this field.

A professional librarian since 2000, Ison most recently served as the reference librarian at the Nevada State Library, where he worked for more than nine years. He has also worked at libraries in Sacramento and El Dorado County, California. He earned a master's in library science from Indiana University.

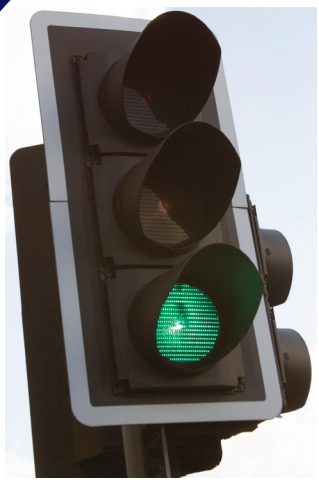
Ison can be reached at mison@dot.state.nv.us or call him at (775) 888-7895.

Construction hard hats were invented in 1933 for workers on the Hoover Dam.
http://www.50states.com/facts/nevada.htm

NEVADA DOT TMCC U.S. Department of Transportation Federal Highway Administration

Retroreflective backplates on traffic signals increase safety

Courtesy of LTAP



When backplates are added to traffic signal indications, the visibility of the illuminated face increases by introducing a controlled-contrast background. The improved visibility of a signal head with a backplate is then made more conspicuous by framing the backplate with a retroreflective border. Combining these features makes a signal more visible and conspicuous in both daytime and nighttime conditions, and therefore reduces the unintentional red-light running crashes.

Background

A project initiated in 1998 by the Insurance Corporation of British Columbia and the Canadian National Committee on Uniform Traffic Control investigated the effectiveness of applying retroreflective tape around the borders of traffic signal backplates. A small number of signalized intersections were treated and followed up with a simple before/after study, which concluded this enhancement effectively reduced crashes. A larger number of sites were later treated and a more robust statistical study was performed.

Since their initial introduction in Canada, several U.S. state highway departments and local road agencies have adopted practices and policies concerning this countermeasure. Additionally, the FHWA has encouraged this treatment as a human factors enhancement of traffic signal visibility and conspicuity for older and colorblind drivers. Adding retroreflective borders is also advantageous during power outages when the signals would otherwise be dark. The retroreflective sheeting continues to provide a visible cue for travelers to take note of the dark signal and adjust their actions accordingly. Per the study included in the Crash Modification Factor Clearinghouse, **the use of backplates with retroreflective borders may result in a 15 percent reduction in all crashes at urban, signalized intersections.**

Guidance

Backplates with retroreflective borders should be considered as part of efforts to improve safety performance at signalized intersections. Adding a retroreflective border to an existing signal backplate can be a very low-cost safety treatment, as the materials are simple strips of retroreflective sheeting. For existing traffic signals that lack even standard backplates, the addition of backplates with a retroreflective border can often be accommodated on the existing mast arm and span wire assemblies, but the structural capacity of the supports must be properly evaluated.

The most effective means of implementing this proven safety countermeasure is to adopt it as a standard treatment for signalized intersections across a jurisdiction so that it is consistently included with all new construction and modernization projects, as well as being a worthy retrofit project for existing signals at intersections with red-light running crash histories. It is important to note that the Manual on Uniform Traffic Control Devices (MUTCD) specifically allows this treatment as an option. In terms of color and size, implementation of backplates and retroreflective borders must be consistent with the latest edition of the MUTCD.

The safety zone: beat the heat

By Scott Alquist, TMCC Safety Center manager and LTAP instructor

Whenever working in extreme heat conditions, always follow these simple guidelines:

Stay hydrated. On a very hot day, drink at least two large glasses of water an hour or four glasses an hour if you are on a labor-intensive project.

Eat a banana. Bananas and other potassium sources will alleviate cramping.

Dress wisely. Light-colored clothing reflects the heat and dress in layers, so you can adjust your attire to the temperature. In addition, wear a wide-brimmed hat (or hard hat) to keep the sun off your face and neck. Also, consider wearing a polar wrap to cool your body's core temperature.

Take extra breaks.

Move to the shade whenever possible.

Wear sunscreen. Slather on at least an SPF 30 and one that is good for UV-A and UV-B rays.

Know the signs and symptoms of heat-related illness.

- Heat exhaustion occurs when the body loses large amounts of water and salt through excessive sweating. This loss of essential fluids disturbs circulation and interferes with brain function. Individuals with heart problems or are on low-sodium diets may be particularly susceptible.
- Heat cramps can also strike when the body loses excessive amounts of fluids and salt. This deficiency typically occurs during heavy exertion.
- Heat stroke—the most serious heat-related illness—occurs when the body suffers from long, intense exposure to heat and loses its ability to cool itself. In prolonged, extreme heat, the part of the brain that normally regulates body temperature malfunctions, decreasing the body's ability to sweat and, therefore, cool down.

Beat the heat by taking care of yourself, dressing appropriately, drinking plenty of water and fluids and knowing when it's time to take a break.

Construction begins on Washoe County's Southeast Connector

By Garth Oksol, PE, RTC project manager and Kathleen Taylor, consultant public information manager

Forty year of planning and engineering are finally paying off for motorists in the Truckee Meadows with construction of the Regional Transportation Commission's (RTC) Southeast Connector Project. Phase one of the project is underway: it's comprised of the construction of Veterans Memorial Bridge over the Truckee River and a new roadway from Sparks Boulevard to just south of Clean Water Way.

The Southeast Connector project team. Photo by Kathleen Taylor, RTC.

The project's second phase, about 4.5 miles long, will extend the new roadway south to the Veterans Parkway/South Meadows Parkway intersection. This phase is currently in development, which involves obtaining environmental permits and completing the design and engineering work.

"There are 13 regional roads on the west side of the spaghetti bowl for drivers to drive to access residential and commercial areas in the south," said Garth Oksol, PE and RTC project manager. "There are only three north-south routes on the east side and Vista Boulevard and Sparks Boulevard both basically dead end at I-80. If something happens at I-580 and US 395, the only road running north on the east side is Double R Boulevard."

Once completed, the new Southeast Connector roadway—which will be called Veterans Parkway—will stretch 5.5 miles from the intersection of Greg Street and Sparks Boulevard at the northern end, to the existing intersection of Veterans Parkway and South Meadows Parkway at the southern end. The road will be three lanes in each direction.

"With this road you only have two signals (Pembroke and Mira Loma) so you avoid having to stop and wait during peak times," Oksol said.

Project fast facts

This ongoing effort between the RTC, partner agencies, and the community will be built over a period of three years. The first phase of work, at the northernmost end of the project, began in February 2013.

Funding

The total project cost is estimated between $230 and $250 million and is 100 percent funded through the local RTC-5 funding. The community has been investing in this project for several years.

Travel

The new roadway could see between 47,000 and 54,000 cars per day in 20 years. The road's speed limit will be 45 miles per hour and includes a separate bicycle path the entire length of the roadway. Drivers will save an estimated 4.5 minutes from their average commute.

Benefits

The Southeast Connector provides a significant economic investment in our community and future economic prosperity. Benefits include:

- **Improving connectivity for north/south travel**
- **Relieving current and projected (year 2030) traffic on regional roads, particularly I-580 and McCarran**
- **Accommodating current and future commercial and residential development**
- **Providing bicycle and pedestrian access in the corridor not currently available**
- **Providing an additional and much needed regional north-south route benefiting the Truckee Meadows**
- **Enhancing safety – motorized and non-motorized travel**
- **Providing better emergency access, especially during floods**
- **Enhancing environmental resources along Steamboat Creek**
- **Enhancing vegetation and protection for wildlife**
- **Providing local construction jobs**
- **Creating economic stimulus**

Economic Impacts

Phase one construction provides 280 local construction jobs. A $65 million construction project (total cost of phase one) creates more than 600 direct and indirect jobs (specific to Nevada using 2008 data).

Project Timeline

The project is on schedule with completion anticipated in 2016.

Truckee Meadows Community College
Nevada LTAP Center
7000 Dandini Boulevard
Reno, NV 89512-3999

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The Nevada LTAP Center Roads Scholar Program

Expand your team's knowledge and improve their skills in roadway maintenance, safety and management techniques. This is a great way for local agencies to keep their employees properly trained and educated on up-to-date maintenance and safety topics taught by LTAP's technical experts.

Tuition fees are low and sessions occur at various locations throughout the state.

Who can participate?

The Roads Scholar Program is designed for all municipal employees and officials responsible for road maintenance and safety in their community. Road masters, road superintendents, crews, public works personnel, managers and elected officials will become even more valuable members of their team as a result of this knowledge. Anyone earning a Roads Scholar certification receives recognition by their managers and peers as authorities in their field.

How do I sign up for the program?

All you need to do is let us know you would like to participate in the program. Attendance is tracked and certificates are awarded after all workshops have been completed.
There are currently 200 participants in the Nevada program.

How can my municipality become part of the Roads Scholar Program?

Any municipal employee or official can register and attend an LTAP workshop.

Email nvltap@tmcc.edu to be added, with a name correction, or to be removed from our mailing list.

For more information or to register call the Nevada LTAP Center at 775-829-9046 or visit: http://www.tmcc.edu/ltap/

What workshops are included in the Roads Scholar Program?

Roads Scholar workshops are conducted each year at convenient locations throughout the state. To pursue the Roads Scholar certification, the participant must complete 10 approved workshops, 4 required and 6 elective within a four-year period. Required courses are: Roadway Drainage, Workplace Safety, Work Zone Safety and Traffic Control, and Introduction to Supervisory Techniques or Maintenance of Local Roads.

The following LTAP workshops are approved for credit toward a Roads Scholar certification. The LTAP Center staff will make every effort to schedule frequent workshops leading to a Roads Scholar certification.

Workshop electives (choose six)

Aggregate Properties and Characteristics
Asphalt Binder Technology
Asphalt Paving Maintenance
Asphalt Paving Rehabilitation
Avalanche Control
Design of Concrete Pavements
Dust Control
Effective Communication Skills
Engineering of Safety
Gravel Road Maintenance
Leadership Techniques
Pavement Systems
Road Materials
Snow and Ice Control
Soils Sampling
Summer Survival/Safety
Winter Survival/Safety