

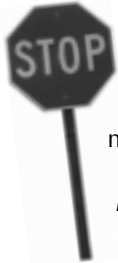
Winter is a good time to inspect signs

Effective, visible signs contribute to making local roads and streets safer. Checking for reflectivity in the dark is one very important sign maintenance task, says WisDOT District 2 safety engineer Tom Heydel. Signs that look good during the day can be nearly invisible at night because they have lost their reflectivity. Heydel is an instructor in the

T.I.C. **Highway Safety Workshops** being offered in January. (See the Calendar for dates and locations.)

Dark winter days make inspection easier. Staff can inspect signs during the first hour or two of the morning shift when it is still dark.

Start with the most critical signs: *Stop, Do Not Enter*, and other warning signs. Signs can also be spot-checked based on their installation date.



Although different conditions cause signs to age at different rates, any sign older than seven years is a good candidate for inspection.

Frequently, all signs in a segment or corridor are the same age and can all be inspected on one trip. Stenciling dates on the backs of signs also helps track aging.

Use a systematic review, based on your sign inventory if you have one, to plan for replacements and to estimate budget costs for spring town meetings.

On the next page are answers to some other signing questions commonly asked of Heydel.

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Calendar

T.I.C. workshops

Specific details and locations for workshops are in the announcements mailed to all **Crossroads** recipients. For additional copies, or more information, call the T.I.C. at 800/442-4615.

Highway Safety A workshop on sensible signing and pavement marking for local roads, sign maintenance, and safer driveways, intersections and roadsides.

Jan 5	Green Bay	Jan 19	Cable
Jan 6	Brookfield	Jan 21	Tomah
Jan 7	Barneveld	Jan 20	Eau Claire
Jan 18	Rhineland		

Local Transportation Issues ETN Series The UW Local Government Center and the T.I.C. address transportation issues in workshops on ETN (100+ Wisconsin sites). Thursdays from 10:30 am to 12:20 pm. \$10 per session. Call 608/262-9960 for a brochure.

Local Transportation Aids and Other Local Roads Issues (ETN, Jan 20) Learn about funding and qualifying for WisDOT local transportation improvement and assistance programs. Also covers new WISLR local road database software, and other Local Roads Advisory Committee recommendations.

Liability for Local Road Agencies (ETN, Feb 9) Review your responsibilities for managing and limiting local road liability. Topics include local government immunity, negligence, ice removal, and traffic control standards and expectations.

Bidding and Inspecting Local Road Projects (ETN, Mar 9) Review sample bid documents for local road paving projects. Learn how SUPERPAVE technology may be applied to local road projects. Discuss how to inspect and manage quality on small paving projects.

Basic Work Zone Traffic Control For road supervisors and maintenance personnel who plan and set up work zones. This workshop covers traffic control devices, the parts of a workzone, and a variety of work zone setups, including mobile operations. It also covers pedestrian, worker, and flagger safety. Participants receive the Wisconsin pocket guide to *Work Zone Safety*.

Feb 7	Tomah	Feb 14	Green Bay
Feb 8	Eau Claire	Feb 15	Brookfield
Feb 9	Cable	Feb 16	Brookfield
Feb 10	Rhineland	Feb 17	Barneveld

Roadway Maintenance Learn how to improve your street and road maintenance operations. Topics will include how to rate the condition of your local roads, how to plan your maintenance program, and techniques for preventive maintenance and rehabilitation.

March 13	Rhineland	March 20	Green Bay
March 14	Cable	March 21	Brookfield
March 15	Eau Claire	March 22	Barneveld
March 16	Tomah		

UW-Madison Seminars

Local government officials are eligible for a limited number of scholarships for the following engineering courses in Madison. For details, use the form on page 7, call 800/442-4615, or e-mail: sauer@engr.wisc.edu

- GIS for Public Works*, Feb 7-8
- Managing Urban Forestry Programs*, Feb 21-22
- Maintaining Asphalt Pavements*, Mar 27-28
- Neighborhood Design and Traffic Calming*, Mar 27-29
- Improving Public Works Construction Inspection Skills*, Mar 29-30
- Development Review and Access Management*, April 10-12
- Managing Street and Highway Design Projects*, April 13-14

Other Training Opportunities

Pesticide Applicator Training for Right-of-Ways Fee \$45/person. Preregister through your County Extension Office or call 608/262-7588 by the date indicated. Course runs from 8:30 am to 2:00 pm.

January 26	Milwaukee	Preregister by January 12
January 27	Wausau	Preregister by January 13

Public Works Supervisory Academy A certificate program in supervisory skills consisting of 10 one-day courses offered by UW-Madison at many state locations on an ongoing basis. Contact Gregg Miller, Professional Development and Applied Studies, (608) 263-8256.

Q. Are fluorescent yellow-green signs required for all pedestrian, bicycle and school signing applications?



A. No. According to FHWA guidelines, as of June 19, 1998, they are allowed as an optional use for pedestrian, bicycle and school signs. WisDOT will use them just for School Crossing and advance warning signs on state highways, replacing the old yellow signs as they wear out over the next five years. It is important not to overuse the color so it doesn't lose its effect.

Q. When must I use an advance warning for a School Crossing sign?

A. Any time you use a School Crossing sign (the school-house shaped sign placed right at the school crossing), you are required to have a school advance sign prior to that. In urban areas it is tempting to think that lower speeds make the advance warning unnecessary. That is not the case. The placement is based on prevailing speed. Tables in the MUTCD give the distance needed to come to a stop for different speeds.

Q. When do I need a School Bus Stop Ahead sign?

A. School Bus Stop Ahead signs are intended for use at locations where a school bus stopping to pickup/discharge children is not visible to a driver for 500 feet in advance. Something that is often

overlooked is taking down signs where buses no longer make stops. This helps ensure that motorists respect the signs that mark active pickup sites.

Q. Do I need to make all my street name signs with the larger six-inch upper case letters and four-and-a-half-inch lower case letters?

A. No. Larger letters are recommended but not required, according to the January 1997 *Federal Register*. The only requirement right now for street name signs is to be reflective. They can be any color except red, and a logo is acceptable. However, I highly recommend these larger letters to assist the driver.

When replacing street name signs you may want to consider using larger letter sizes because they are easier for drivers to read. Studies show that in rural areas sign lettering should be one inch high for every 50 feet of distance. At 50 mph it takes at least 300 feet to recognize a street name and make the turn. That translates to six inch high letters.

Q. Can I mount stop signs and street name signs on the same post?

A. Yes, as long as the shape of the stop sign is not compromised and drivers can still see and recognize it (Jan. 1997 *Federal Register*). Both WisDOT and FHWA recommend that the signs be separated by six inches vertically so the shape of the stop sign can be



recognized. According to WisDOT policy, any stop sign approaching a state highway must be on a separate post from the street name sign unless that is impossible because of lack of space. The stop sign is very important, though, so it is best to mount it separately from street name signs.

Q. When are Stop Ahead signs required?

A. Stop Ahead signs are required any time a county highway approaches a state highway, according to the *Wisconsin Supplement* to the MUTCD. They should also be erected on any town road approaching a state highway where the stop sign is not readily visible.

In other locations, a stop ahead sign should be erected where a stop sign is not visible from far enough away to come to a stop. There are charts in the *Wisconsin Supplement* showing proper distances for various speeds. As a rule of thumb place them 300-400 feet ahead for speeds 40 mph and under, and 700-750 feet for 45 mph and up.

Advance distances are generally based on the posted speed, but if you know that people actually travel faster despite enforcement, consider the actual speed in placing the advance warning. For example, if the posted speed is 30 but traffic is actually going 50, install the sign farther away from the intersection.

In some cases the Stop Ahead sign may be used for emphasis where there is poor observance of the stop sign.



Resources

Materials listed here are available from the Wisconsin T.I.C. unless otherwise noted. To get your copy, call 800/442-4615 or use the form on page 7.

The SAFER Manual (Safety Evaluation for Roadways), T.I.C., 1997. Using a hazard rating scale, demonstrated with many pictures and brief text, the *SAFER Manual* can help you identify potential hazards along roadsides, at intersections and railroad crossings, and associated with roadway geometrics. It will also help you rate safety needs, address immediate problems, and budget for longer term safety improvements. Use the SAFER Manual to plan your work for next year.

Utility Accommodation Policies To help your agency review, update or draft a new utility accommodation or street occupancy policy, the T.I.C. offers two samples. The Marathon Co. Town Utility Policy is based on the WisDOT Utility Accommodation Policy. It offers a consistent approach and permit process for state, county, and town roads. The City of Madison Street Occupancy Ordinance and Permit, adopted Feb. 1999, includes a degradation fee.

Snow Fence Guide, Strategic Highway Research Program, 1991, 60 pp. Control of blowing snow has safety and cost saving benefits. This technical booklet describes how to design and install effective snow fence. It is intended for highway engineers and public works staff. Limited supply.

Manual of Practice for an Effective Anti-icing Program, Federal Highway Administration, 1996. This publication is a summary of recommended practice for using liquid chemicals in pre-storm roadway treatment. The work is based on studies in several states. Intended for maintenance personnel responsible for managing anti-icing programs. Limited supply

Controlled Low-Strength Materials (CLSM), American Concrete Institute ACI 229R-99, 1999, 15 pp. Basic information on CLSM (flowable fill) technology, emphasizing CLSM material characteristics and advantages over conventional compacted fill. Addresses applications, material properties, mix proportioning, construction, and quality-control procedures.