SUMMER 2005

TIC CROSSROADS

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WISCONSIN TRANSPORTATION INFORMATION CENTER– LTAP

"A quality geogrid product can cut your aggregate thickness in half, or more, and reduce or completely eliminate the need for subexcavation."

INSIDE

Geosynthetic on town road—less aggregate, stronger base

LAST YEAR when La Pointe Town Foreman Keith Sowl rebuilt three small road sections, his crews laid down geotextiles. It was the first they time used fabric on a town road. "It was a good test," he says. "I hope to use a lot more. I have 12 miles of road I want to work with."

La Pointe is on Madeleine Island about 12 miles out into Lake Superior from the rest of Ashland County. The soils are a greasy clay and every ton of aggregate has to be barged in across the lake. At about $22 a ton, aggregate costs four to five times as much as on the mainland.

When Sowl attended a TIC Road Maintenance Workshop in Hayward, it piqued his interest in the savings and benefits. A layer of geotextile fabric could separate the clay from the aggregate. That would prevent the fine particles from pumping through the gravel, weakening the road. As a result, they could reduce the gravel layer from 12 inches to just 8. Next, Sowl attended "Geosynthetics for Beginners," a two-day engineering seminar in Madison.

Last spring they did the work. "The crew put the fabric down the way they taught us in that class," says Sowl. "Lapping it over. Making sure there are no wrinkles. We pinned it frequently so nothing came up as we were pushing gravel out over it." The new sections held up well after their first winter. "Right now they look beautiful," he says.

TOP: Careful installation of geotextile is important. BOTTOM: Fabric holds clay back, keeping it out of the aggregate.

Help also came from Ashland County Highway Commissioner Emmer Shields, who assisted with cost/savings analysis; and consulting engineer Scott Turner, Becher-Hoppe, Associates.

A couple years ago Shields designed a new taxiway for the Madeleine Island airport. The work involved digging out three feet of bad soil, putting in an underdrain, sand fill, geotextile fabric, and geogrid. It was then covered with 8 inches of gravel and 3 inches of asphalt. "It's the strongest piece of road on the island," says Sowl. "That experience gave us the confidence to go ahead." Town crews helped on the project.

What to use and when

The hardest part of the project was figuring out which geosynthetic product to use, says Sowl. There are many products with different strengths and functions, and they are continually evolving. Fortunately, the U.S. Army Corps of Engineers has published some good studies showing the differences between many of these products. Geosynthetic manufacturer Tensar also gives out cost estimating and design tools to help select the appropriate geosynthetic and required fill thickness for soft soil applications and pavement reinforcement.

"People use the term geotextiles loosely," says Contech Construction Products sales rep Keith Johnson. "Actually there are fabrics which are used to separate and grids for reinforcing the base." Fabrics do a good job of keeping soil in place and moving water, but they are really not designed to strengthen the base, he says. Geogrids, which look like rigid plastic snow fence, lock aggregate in place and provide strength. "They work kind of like a snowshoe in snow; they grip and spread the load."

"Geogrid has the same function as re-bar in concrete," says Ashland County Highway Superintendent Emmer Shields. "Up here where we have a lot of suspect subgrades it's really helping an awful lot." Local soils vary tremendously within a short distance, he says. You can't anticipate a soft

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Geosynthetics

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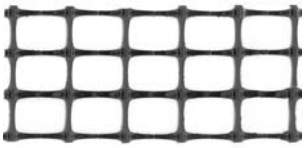
"Up here where we have a lot of suspect subgrades it's really helping an awful lot."

Using geotextile fabric over bad soils, like this clay on Madeleine Island, saves money and makes a better road.



Geogrid spreads the load and locks aggregate in place. It works like rebar in concrete.

spot, and often it's impossible to dig it out and replace it with good material. Road builders in other parts of the state are also using geogrid over peats and other compressible soils to minimize fill thickness and reduce differential settlement.

Geogrid, geotextile, digging out all can work, says Dan Baker, P.E., North Central Region Manager for Tensar. "It comes down to economics. Customers want what will cost the least now to build and is proven to work."

Currently geotextiles cost $.50 to $1.50 per sq yd; geogrid $1 to $4 per sq yd. "The price sometime shocks people," Baker says. "But if you look at the bottom line, a quality geogrid product can cut your aggregate thickness in half, or more, and reduce or completely eliminate the need for subexcavation. The economics work out and you are frequently left with a better performing road than typical dig out and replace."

Four factors go in to the calculation: soil softness, vehicle loading during construction (axle load and quantity), aggregate thickness, and the presence/type of geosynthetic. While softness is measured by engineering tests like Standard Penetration and California Bearing Ratio (CBR), you can make a rough visual estimate for some preliminary calculations. The total CBR range is 0-100, but the critical measurements for soft soil are 0-4, Baker says.

According to a Tensar guide, a man standing on a very soft soil will sink more than 3 inches, approximating a CBR of less than 0.4. When a man walking sinks one inch, the soil is "medium" or about a CBR of 0.8-1.6. On a "very stiff" soil, where a loaded dump truck ruts 1-3 inches, the CBR is 3.2-6.4. The guide is in a handy paper "slide rule" that can be used in the field. It has visual cues, test value approximations, and a way to calculate required aggregate thickness both unreinforced and reinforced with geogrid.

On small projects, like the ones rebuilt last year in La Pointe, such estimates are good enough. On bigger projects, you can make more specific calculations in the pavement design, and calculate the aggregate depth and costs more precisely. For constructing a road over bad soils, geo-synthetics make a lot of sense, and there's help available to make it happen, as Keith Sowl found out.

TIC Road Maintenance workshops are held every March in eight locations around the state. Watch for information in the Winter ***Crossroads*** or on the TIC Web page.

The publication ***Use of Geogrids in Pavement Construction,*** U.S. Army Corps of Engineers, Technical Letter No. 1110-1-189, 14 February 2003, is available as a pdf online at: *http://www.usace.army.mil/inet/usace-docs/eng-tech-ltrs/etl1110-1-189/entire.pdf#search=*

See page 4 for other resources.

Highway Watch® training picks up speed

The number of volunteer observers on our roadways is growing as local agencies schedule Highway Watch® training. This nationwide safety and security program for the highway sector is being coordinated statewide by the Wisconsin Motor Carriers Association (WMCA).

"I really think it's a great program," says Highway Watch® instructor Jim De Pouw. "It's of great importance for counties and municipalities to become involved. Their employees are around every day, and they know what appears to be normal." A retired over-the-road truck driver, De Pouw has been presenting training sessions since December. The two-hour program was recently part of safety training days in several counties.

"We thought it was beneficial." says Gary Kennedy, Manitowoc County Highway Commissioner. "The presenters were truck drivers themselves, so they could talk on same level as our staff. That kind of sold the program to our guys."

Usually about 80% of each group chooses to become part of the program after the training, De Pouw says. Participation is voluntary. Those who join receive an ID card with a unique spotter number which they give if they report a safety incident.

"It would be nice if we could get most of the other counties to participate," says De Pouw. "That would be a huge addition to this network."

To request Highway Watch® training call Bob Young or Sue Webb at the WMCA: 608-833-8200, ext.18. Go to *www.highwaywatch.com* for general information.

Key changes to the Wisconsin Supplement of the 2003 MUTCD

by Tom Heydel, Traffic Operation Engineer, WisDOT District 2

WISCONSIN published its Supplement to the 2003 edition of the Manual on Uniform Traffic Control Devices (MUTCD) in February 2005. This officially puts the 2003 MUTCD's rules and guidelines into effect in the state. The Wisconsin Supplement documents state-specific interpretations and decisions by referencing sections of the MUTCD. You will need both publications to understand and follow current signing and marking rules and guidelines.

Some of the significant changes made from the 2000 MUTCD to the 2003 MUTCD and Wisconsin Supplement are reported here. *(Author's comments in blue italics).*

Blinker Signs *Section 2A.08.* LED (Light Emitting Diode) signs are now allowed based on four guidelines for use:

- Engineering study needed, and
- Crash problem or
- Visibility restriction or
- Unusual geometrics (hills and curves)

Blinker signs have LED lights around the sign's perimeter. While most often used on a STOP sign, the lights can also be placed on other sign types. The color of the blinker has to match the color of the sign's legend, border, or background. A STOP sign would have red or white LED lights.

Contact the jurisdiction authority for a roadway before installing this device to determine if they permit them.

Posts and mounting *Section 2A.21.* Where engineering judgment indicates a need to draw attention to a sign during nighttime conditions, a strip of retroreflective material may be attached to the post of regulatory or warning signs facing traffic. If used, tape has to be 2 inches wide; placed the full length of the support from beneath the sign to within 2 feet above the edge of the roadway; and the color has to match the sign color. YIELD and DO NOT ENTER signs would have to be red. Do not install on state-owned sign posts unless authorized by the WISDOT District Traffic Section based on an engineering study.

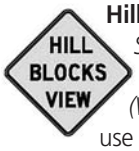
DNE on STOP/YIELD *Sections 2B.06 and 2B.34.* A DO NOT ENTER sign is not allowed to be placed on the back of a STOP sign or YIELD sign where it alters the sign's shape. It is preferred to place the DO NOT ENTER sign next to the STOP or YIELD. You are allowed to place the DO NOT ENTER on the back of a STOP sign if you trim the edges of the DO NOT ENTER sign so it matches the octagon shape of the STOP sign.

Pedestrian signs *Sections 2B.12* and *7B.09. In Street Pedestrian Signs (R1-6 and R1-6a).* This sign provides additional emphasis for pedestrian or school crossings. It is placed in the street and supplements existing warning signs.

- Not recommended for roadways with speed limit of 45 or higher
- Message must use the word "YIELD" as required in the Statutes not "STOP"
- Breakaway support required
- Don't put at an intersection approach controlled by a STOP sign
- 2 ft maximum mounting height
- Not intended for outside shoulder or parking lane. Place in street.

Additional signs on winding road *Section 2C.06 Winding Road sign (W1-5).* At a winding road situation (more than three curves closely spaced) a night arrow (W1-6) or chevrons (W1-8) should be placed at the first curve or turn leading into the winding road. Language regarding the need for an additional curve or turn sign prior to the winding road sign has been removed.

An advisory speed plaque should be installed under the horizontal curve signs where the posted speed varies from the curve speed by 10 mph or more.



Hill Blocks View sign *Section 2C.14.* This new warning sign *(W7-6)* is intended for use where a vertical curve (hill) blocks the vision of a driver. Tells drivers to reduce their speed as they approach and traverse the hill as there is limited sight distance available; for example a commercial driveway over the crest of the hill. Should add an advisory speed plaque based on available stopping sight distance.

Advanced traffic control signs *Section 2C.29.* Advanced traffic control signs *(W3-1, W3-2, W3-3, & W3-4)* are signs such as STOP AHEAD and SIGNAL AHEAD. The unit of government that has jurisdiction of the roadway on which the STOP AHEAD is to be placed is responsible for the installation and maintenance of the sign.

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The 2003 MUTCD now regulates signing and marking on all local, county, and state roads. State-specific interpretations and decisions are in the Wisconsin Supplement.

TIC Safety workshops, held in February, can help you understand signing and marking.

PHONE
800.442.4615
FAX
608.263.3160
EMAIL
tic@epd.engr.wisc.edu
WEB SITE
http://tic.engr.wisc.edu

Agreement eases emergency cleanup

"We were pretty much back to normal in two weeks, thanks to the help we got."

LAST MAY a severe windstorm toppled dozens of large trees in Grafton. The nearby villages of Cedarburg and Saukville were also hit hard.

"We lost 32 big trees in one area. It was four blocks wide and five blocks long," says Dave Murphy, Director of Public Works for Grafton. "Fortunately there was not much damage to homes, but the roads were blocked. You couldn't get through at all."

Getting enough manpower and equipment to open the streets was the first challenge. The next was dealing with huge piles of brush. Both would put a major strain on the resources of this small village.

Fortunately, Grafton was one of eleven neighboring communities that had just signed a public works mutual aid agreement. "I got on the phone and started calling," says Murphy. Jackson and Port Washington could each spare three men and a chipper. Later West Bend sent a tub grinder and operator to grind the debris.

"We were able to get the streets open the same day. The next was a Saturday so our crews started picking up brush," Murphy says. "We were pretty much back to normal in two weeks, thanks to the help we got. And with that tub grinder from West Bend, we got everything ground up in about a day and a half. Otherwise we would have had to truck the brush to West Bend, costing enormous time and effort."

West Bend launches aid discussion

"It started about three years ago when our city administrator suggested we exchange equipment lists with the surrounding communities," says Terry Kiekhefer, DPW for West Bend. "Lists go out of date, but I thought: police and fire have mutual aid agreements. Why not public works?"

The Federal Emergency Management Agency was asking a similar question. Their concern was trying to make disaster management more effective while streamlining the flow of dollars into injured communities. They began raising the topic at training programs.

Starting with sample agreements found on the Internet from the states of New Hampshire and Washington, Kiekhefer and another staff person drafted a document. After the city attorney reviewed it, Kiekhefer started meeting with public works reps from other communities. There were plenty of issues to work out.

"Workman's Comp, equipment insurance, communication issues, different rules for different unions." He ticks them off quickly. "Defining what is an emergency. Does the pay clock start when they leave or when they arrive? Who pays for the fuel? The key issue pretty much throughout was cost: who pays?"

It took about a year for the public works reps to hammer out their differences. Then the document had to be approved by each community's elected council or board. That process took another year. In May 2004 eleven communities signed on, just in time to help Grafton, Saukville, and Cedarburg.

Sharing what they can spare

In the end the communities decided to help each other for no cost unless FEMA was invoked and provided reimbursement. "We talked it through and everyone came to understand the concept: if it's you today, it will be us tomorrow," says Kiekhefer. "Assistance from other communities is what will help save your budget."

The key elements that make the agreement work are:

1. Each community authorizes a person to decide on his own authority whether to send help and what it will be.
2. No one is required to provide assistance. All help is voluntary.
3. Wages, union rules, start/stop times, etc. are the lender's responsibility.
4. Equipment lists and contact information are exchanged and updated annually.

Having enough participants is important to spread the cost and responsibility. Proximity, amount of resources, and resource balance are also considerations. Since help has to arrive quickly, travel time and geography are important. Similarly, if one group has a lot of equipment and staff, they probably will be doing much more lending than receiving.

For that reason Washington County did not join. "We have not entered into written agreements on aid," says Ken Pesch, Highway Commissioner. "We do respond if a municipality calls with an emergency condition, but with the imbalance in equipment available, we shouldn't have to call on a village or city very often. It would be too lop-sided."

A push from the Feds

Making sense of local disaster management and making it more effective are among the goals of the Department of Homeland Security (H.S.). The agency has developed a National Incident Management System (NIMS) and is now pressing states to begin putting the system into effect at the local level.

"They want everybody to be NIMS compliant by the end of 2006," says Diane Kleiboer, Disaster Resources Supervisor, Wisconsin Emergency Management. "But that is predicated on Homeland Security developing all of the criteria and guidance, which they have not done yet."

Encouraging local public works mutual aid agreements is one part of the effort. Last September, H.S. published a revised policy on "Mutual Aid Agreements for Public Assistance (9523.6)." This clarifies the eligibility of costs under the Emergency Manage-

Contact Terry Kiekhefer, Director of Public Works, West Bend at: 262-335-5079, or terk@ci.west-bend.wi.us

Contact Bruce Slagoski, Terrace Operations Supervisor, City of Beloit Public Works at: 608-364-2929 or Slagoski@ci.beloit.wi.us

Talk with your County Emergency Management Director.

ment Assistance Compact (EMAC) where mutual aid agreements are in place. One guideline now says that if the agreement is to supply aid at no cost, FEMA will follow that precedent and not give reimbursement. In an earlier version, the policy indicated that no aid would be paid unless a Mutual Aid Agreement was in place.

"There's a lot of speculation and angst about what everybody needs to do at all levels of government to be compliant," says Kleiboer. "Most of our communities and state are NIMS compliant because they have made a good faith effort to do ICS training and hone their skills in implementing ICS."

Currently the requirement only affects future grants, not disaster assistance; it leaves the definition of compliance vague. The guidelines are evolving, she says, and until they are in place, there will be some latitude in interpretation.

Neighbor helping neighbor

While federal and state agencies are slowly grinding their way to resolution, local communities can help each other. "If you look at the whole scheme of things, most times when something happens it's not going to be a FEMA disaster," says Dave Murphy of Grafton. "So we will be sending staff and equipment to help. Now, with our mutual aid agreement, we know who to call and what to expect."

In 2004 West Bend's Terry Kiekhefer presented their mutual aid agreement at the Wisconsin APWA chapter conference. APWA-Wisconsin asked him to head an Emergency Management Committee and promote the concept around the state. Since then he has given presentations, advice, and copies of documents to many localities. "It's really well received," he says. "It's a matter of working with every group of people, working through all the issues, and agreeing to work together."

Just recently the City of Beloit Public Works distributed a draft agreement among neighboring

communities. "The most critical thing is a list of equipment for every community involved," says Bruce Slagoski, Terrace Operations Supervisor who spearheaded the project. "For example, if there's a tornado you need to know who has chain saws. You know where all your resources are so you can get people on scene faster."

Mutual aid among communities is a long tradition; the written agreements make the process smoother and faster.

"Everybody came to understand the concept: if it's you today, it will be us tomorrow."

Sharing stretches budgets

FEW THINGS are as satisfying as ditching an old, decrepit piece of equipment for the latest, shiniest version. Economic reality is now making that harder and less frequent. To stretch their budgets, many roadway agency leaders have turned to cooperating, swapping, and entrepreneurship.

For example, Washington and Ozaukee county highway departments cooperate on chip sealing projects. Ozaukee has a good chip spreader while Washington has extra hauling trucks. "We team up and do it at the same time," says Commissioner Ken Pesch, of Washington County. "We rent their spreader with the operator, and then we help them haul their aggregates. It works very well."

In the winter, those same hauling trucks work for the City of West Bend. The city leases the trucks to haul snow from the downtown area. In return Washington County hires West Bend's urban street sweeper when they need to pick up debris on roads with curb and gutter.

"There's a lot of back and forth," says Pesch. "We also have a deal to borrow salt from the Village of Germantown, if our plow operator is short at the end of his run. Rather than drive 15 miles back here he loads up from the village's salt shed. Then we replace it when we have time."

Buying power, rental income

Fuel is taking an ever bigger bite out of budgets. Not only do gas and diesel costs keep rising, but someone has to own and maintain the fueling system. Outagamie County saves $16,000 a year by running a bigger operation that nearby communities fuel at.

"If we only fueled our own equipment, our fixed costs would be $.23 a gallon," says Al Geurts, County Highway Commissioner. "We bring that down to $.16 by sharing. Plus, we're buying larger quantities so we have more buying power." Even though locals pay $.11/gallon for fixed costs plus the fuel price, they still save

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Sharing stretches budgets

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money over buying in the private marketplace.

Rental income can make it possible to buy and operate specialized equipment. Outagamie County, for example, owns a $480,000 road reclaimer. It uses a lot of fuel, has high maintenance needs, and takes expertise to operate, but it can only do a mile of road a day.

"Last year it ran 117 days, pretty much six days a week for the whole construction season, but only 24 percent were on Outagamie County highways," says Geurts. "The days are gone when you can buy expensive equipment and it stays in the county full time."

Besides sending trained operators with equipment, Geurts also shares expert staff, such as their bridge inspector. The training costs add up: required course work, travel expenses, and a mandatory 40 hrs accompanying an experienced inspector. "I estimate it costs my department about $11,500 over five years to have a certified bridge inspector on staff," Geurts says.

Contracting with other counties and local municipalities to inspect their bridges at $30-$35 an hour helps recover the training costs. It's a significant savings for them over hiring a private inspector. In addition, the inspector becomes familiar with the bridges, saving even more time and money.

Al Geurts, Outagamie County Highway Commissioner, is available to make a presentation on *Sharing Resources* and answer questions at meetings. Contact him at: 920-832-5673. *Geurtsaj@co.outagamie.wi.us*

Plan now to attend the next regional or statewide meeting of people like you. County commissioners meet in the summer. Foremen meet in the fall. Ask around to find out dates and locations.

Sharing big expensive equipment, like Outagamie County's road reclaimer, spreads costs and keeps it in use.

Making connections

You could find similar examples at most road agencies around the state. The connections are informal. Superintendents, foremen, and commissioners get to know each other at meetings. Word of new equipment spreads quickly. Even ***Crossroads*** gets into the act, helping spread good ideas.

Get to know the streets and highway folks next door. When you need equipment or a service, call around to see who has it. Sharing resources can save you money, and it's satisfying as well.

Key changes to MUTCD

from page 3

The unit of government that has jurisdiction of the roadway approaching the STOP sign shall maintain the visibility of the STOP sign all the way to the face of the STOP sign.

The unit of government that has jurisdiction of the through roadway *(State and County highways, for example)* shall be responsible for the installation and maintenance of the STOP sign placed on roadways at the approach to the through roadway. *These are roadways not driveways.*

Chevron spacing *Section 2C.10 Chevron alignment spacing (W1-8).* To provide guidance on the spacing of chevrons, a spacing chart was added. When following the chart, choose a speed based on advisory speed or ball bank indicator speed.

RECOMMENDED SPACING	SPEED
80′	25-30 MPH
120′	35-40 MPH
160′	45-55 MPH

Chevrons are a valuable, low cost safety tool for addressing run-off-the-road crashes at curves or turns.

RESOURCES

Print copies of publications are available free from the TIC while supplies last. Electronic copies may be downloaded from the TIC Web site. Videos and DVDs are loaned free through county UW–Extension offices.

TIC Web site
http://tic.engr.wisc.edu/

Publications

An information packet on ***Mutual Aid Agreements*** for public works agencies is available from TIC. It includes copies of agreements that are discussed in this issue. Contact us to get one.

Integrated Roadside Vegetation Management, TRB NCHRP Synthesis 341, discusses current vegetation management practices, gives results of a survey on vegetation management, and includes examples of best practices in roadside vegetation management. Contact TIC for a paper copy of the results without appendices, 24 pp. The full report, 89 pp (3.1 Mb) is available free at http://trb.org/news/blurb_detail.asp?id=4885.

Websites

The Wisconsin Supplement to the Manual on Uniform Traffic Control Devices is online at: http://www.dot.wisconsin.gov/business/engrserv/wmutcd.htm. You can get a user ID/password by following the instructions on the Web page. Or call Matt Rauch at 608-266-2375 for a print copy.

Applications of Geotextiles, Geogrids, and Geocells in Northern Minnesota is available online at: http://www.mrr.dot.state.mn.us/research/MnROAD_Project/MnRoadOnlineReports.asp

The report discusses the use of geotextiles on local and county paved and gravel roads in northern Minnesota.

Videotapes

NEW ***Recommended Use of Reclaimed Asphalt Pavement in the Superpave Mix Design Method*** (CRP-CD-44), National Cooperative Highway Research Program (Project 9-12), 2004,12 min. CD-ROM #18761

Information on using Reclaimed Asphalt Pavement (RAP) mix designs for hot mix asphalt pavement designed using Superpave methods. Includes specific recommendations on adjustments in Performance Grade Binder selection based on the percentage of RAP in the mix design. Presented in Quicktime Video Format. Information on downloading the free Quicktime video player is included on the CD-ROM.

*Web addresses are live in the e-version of **Crossroads** on the TIC Web page. Clicking them should take you directly to the indicated page. If you are unable to retrieve a document, contact us and we will get a print version to you.*

Speed reduction sign *Section 2C.30.* This sign is no longer a black and white regulatory sign. It is now a yellow background with black letters warning sign (W3-5). There is a phase-in period of 15 years. As you replace your reduce speed ahead signs, use the new W3-5.

Crossing signs *Section 2C.41 Non vehicular crossing signs.* Added the wheelchair symbol warning sign, snowmobile warning sign, and equestrian way sign for crossing locations.

Speed plaque *Section 2C.46 Advisory speed plaque (W13-1).* An engineering study is encouraged before using this plaque mounted under a warning sign. Do not use this plaque by itself.

Street name signs *Section 2D.38.* Use larger letters for overhead street name signs: 8" UPPER CASE and 6" lower case letters for better readability. Post-mounted street name signs should have a minimum of 6" UPPER CASE and 4½" lower case letters or 6" CAPs (WisDOT recommends UPPER/lower case letters), except for low speed roadways, 25 MPH or less where 4" CAPS are allowed.

Pavement marking

Dotted line extensions *Section 3A.05.* May use a 2' line and 2-6' gap. Used as an extension from a solid turn lane, channelizing line, or a skip line pattern through an intersection to define the path for the motorist to take, such as at a dual left turn lane.

Wider edgeline *Section 3B.06.* It is permissible to use a wider edgeline for emphasis. The standard is 4" wide.

Although there is no upper limit, avoid any widths over 8-10 " so you don't take away from the emphasis of other pavement markings such as lane lines and channelizing lines for turn lanes.

Pavement ratings 2005 — when, how, and what's changed

PAVEMENT RATINGS are due in 2005. Every two years municipalities and counties are required to rate the physical condition of their roads and submit the information to the Wisconsin DOT. The data is collected in the WISLR database (Wisconsin Information System for Local Roads). December 15 is the deadline for submitting rating information this year. Details are in a WisDOT letter sent in May to local officials.

PASER (Pavement Surface Evaluation and Rating) is the most widely used system for rating roads. Developed by TIC, the system has manuals describing how to use it. (Request them from TIC.) This is the same system used in past years.

A related computer software program, PASERWARE 3.0, has been discontinued. With previous versions of this program (PASERWARE 2.5 and earlier) the user could enter and store pavement ratings in a personal computer and use the program to help with multi-year budget development and planning pavement projects.

Joe Nestler, Chief of State Highway Program Development, WisDOT Bureau of State Highway Programs explains:

"The TIC and WisDOT have concluded that the expense and complexity required to complete development and maintain PASERWARE 3.0 would compromise its usefulness as well its as long-term data sharing objectives with WisDOT. Consequently, a decision was made to discontinue development of PASERWARE 3.0 and to move forward with adding more comprehensive pavement management functionality in WISLR."

TIC and WisDOT are working to design and develop multi-year budget planning capability within WISLR's Pavement Analysis Tools. The new functionality should be available in September 2005. Current users of Paserware 2.5 will not be able to upload their data to WISLR, but can continue to use it to keep an inventory of their roadway system, retain past improvement records, etc.

These solutions should:

- Ensure long-term pavement management software availability through WISLR
- Provide comprehensive pavement management tools for use by local government
- Promote effective data sharing (i.e. downloads to locals and data submittals to WisDOT)
- Promote long-term data accuracy for locals and WisDOT

How to submit data

WisDOT's preference is for local communities to enter the data on line with WEB WISLR. (See the WisDOT letter for details.) The person who does this must complete training and be authorized by WISLR. New tools within WEB WISLR make it easier to enter the data, download and print it.

Another way is to send an e-mail request for an electronic spreadsheet, enter the data, and return the completed form by e-mail. The final option is to request a paper copy of the spreadsheet, fill it in manually, and return it.

"A decision has been made to discontinue development of PASERWARE 3.0 and to move forward with adding more comprehensive pavement management functionality in WISLR."

For pavement rating spreadsheets, contact Crystal Van Woelderen, at 608-266-7135 or by e-mail: downloadinfo@dot.state.wi.us

To gain access to WISLR on line go to: *http://www.dot.wisconsin.gov/localgov/wislr/index.htm*

PASER Manuals are available from the TIC as pdfs or in print.

For an explanation of the what and who of WISLR and PASER, see the story and chart on page 9 of Winter 2005 ***Crossroads***, online on the TIC Web page.

CROSSROADS provides information on roads and bridges for local officials. Published quarterly by the Wisconsin Transportation Information Center (TIC)—the nationwide Local Technical Assistance Program (LTAP)—with assistance from the Federal Highway Administration, WisDOT, and the University of Wisconsin–Extension. For permission to reproduce articles or graphics, please contact us.

Don Walker DIRECTOR
donald@epd.engr.wisc.edu
Steve Pudloski STAFF
pudloski@epd.engr.wisc.edu
Ben Jordan STAFF
jordan@epd.engr.wisc.edu
Keith Knapp STAFF
knapp@epd.engr.wisc.edu
Susanna Fuerstenberg PROGRAM ASSISTANT
tic@epd.engr.wisc.edu
Lynn Entine WRITER/EDITOR, ENTINE & ASSOCIATES
Susan Kummer GRAPHICS, ARTIFAX

PHONE
800.442.4615
FAX
608.263.3160
EMAIL
tic@epd.engr.wisc.edu
WEB SITE
http://tic.engr.wisc.edu

FEEDBACK

Please fill out this form and fax or mail (in separate envelope) with the mailing label below.

NAME _____ TITLE/AGENCY _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

PHONE _____ FAX _____ EMAIL _____

☐ Mailing list change/addition ☐ Information/resource request ☐ Idea/comment

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☐ Other

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CROSSROADS

Wisconsin Transportation Information Center
University of Wisconsin–Madison
432 N. Lake Street Room 805
Madison, WI 53706-1498

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CALENDAR

TIC Workshops

Specific details, locations and registration forms are sent to everyone on the CROSSROADS mailing list before each workshop. You can also get additional workshop information and register by calling 800-462-0876 or going online at http://tic.engr.wisc.edu/enroll.html

Winter Road Maintenance

Prepare for winter operations. This workshop covers the effective use of salt and sand, anti-icing and prewetting, winter operations planning, plowing operations, and equipment ideas. It's a great opportunity learn what is new in snow and ice chemicals, equipment and technology and share experiences and tips for better winter operations.

Oct 25	De Pere
Oct 26	Menomonee Falls
Oct 27	Barneveld
Oct 31	Rhinelander
Nov 1	Cable
Nov 2	Eau Claire
Nov 3	Tomah

On-site Workshops

Basic Work Zone Traffic Control

Flagger Training

Basic Surveying for Local Highway Departments

TIC can bring these basic programs to your shop or office. Save time and travel costs. Schedule training for your convenience and ask the instructors to adapt the content to your specific needs. On-site workshops let you train more people for the same or less cost — including staff from other municipal departments, from nearby communities, and from businesses you contract with. Contact the TIC early to ensure you get the program you need on the date you want.

Other opportunities
Snow Plow Roadeo

The APWA Snow Plow Roadeo is a friendly competition that tests crews on a plowing challenge course at Lambeau Field in Green Bay. In 2005 it will be Wednesday, Sept 21. To register contact: T. J. Sorensen, Motor Services, City of Green Bay, 920-492-3751.

UW–Madison seminars

Local government officials can request a scholarship for the following Engineering Professional Development courses. Descriptions are available at http://epd.engr.wisc.edu or call 800-462-0876. All courses are held in Madison.

JULY 2005

18-22 Geotechnical and Foundation Engineering Principles and Practices for Civil Engineers and Others

SEPTEMBER 2005

29-30 Managing Snow and Ice Control Operations

OCTOBER 2005

17-18 Storm Water Detention

19-20 Storm Sewer System Design

TIC Safety workshops, held in February, can help you understand signing and marking. *See story on page 3.*

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