

County Administrator's Digest

January 27, 2012

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WELLNESS BLOG

I received a huge number of responses to the wellness blog that I sent out earlier this week. There were a total of 102 responses to the blog, Facebook or County email. Thank you to everyone who forwarded their thoughts.

QUARTERLY ROAD COMMISSION MEETING (Brett Laughlin)

Quarterly Road Commission Meeting

County Commissioners Kuyers, Rycenga, & Disselkoen

County Administrator Vanderberg

County Road Commissioners Bird & Elhart

County Road Commission Managing Director Laughlin

MDOT Representatives Weerstra, Kent, & Green

Highlights of the meeting are included below;

- MDOT representatives were present to review the progress on the M-231/US-31 Bypass. Progress continues with plans to begin the construction of the bridge crossing the Grand River in 2013. It was anticipated that the bridge construction would start in 2012, however, the funding limits as currently set by the federal government for 2012 has required MDOT to move delay the bridge letting. The improvements to M-104 and the 112th Avenue/I-96 portions of the project will be constructed in 2012. It is still the goal and anticipation of MDOT to complete the improvements from M-45 to I-96 in 2015. It was discussed that the current project does not include a bike path crossing of the Grand River, but given the slight delay it was noted that funding to reintroduce a bike path component into the design and construction of the bridge still may be an option.
- Art Green was introduced as the new MDOT Muskegon TSC manager. Through MDOT's reorganizational process, the Muskegon TSC is now responsible to service the entire portion of Ottawa County.



- MDOT reported on the recent M-21 improvements. The Michigan turn for 64th Avenue @ M-21 is being evaluated for additional signing and treatments.
- OCRC representatives handed out and reviewed the status of 2012 Primary Road and Bridge Programs.
- OCRC representatives handed out and reviewed the status of the Michigan Transportation Fund disbursements.
- OCRC representatives handed out and reviewed the recent salt usage and allocations and the winter maintenance overtime report.
- The group discussed how potholes are handled. OCRC encourages the reporting of potholes by calling the Grand Haven office or to utilize the reporting tool on the OCRC website.

The group discussed recent rumors of a possible stimulus program and “shovel ready” projects. The following documents were placed in Commissioner’s mailboxes: OCRC Winter Overtime Hours Analysis; OCRC Salt Purchases; OCRC Michigan Transportation Fund; OCRC 2012 Primary Road Program.

YOUR OTTAWA COUNTY CIRCUIT COURT- ACCOUNTABLE, TRANSPARENT (Kevin Bowling)

Government must operate efficiently and economically. The courts are not exempt from these principles. However courts, unlike the legislative and executive branches, generally operate in the background, which can lead to less public scrutiny. Additionally, as each case is unique, a court’s function is to listen to the unique facts of each case and then resolve the dispute fairly and justly. This can make it more difficult for courts, and judges, to recognize that they, like other governmental officials, are accountable to the public in general.

The Ottawa County Circuit Court has long recognized that it is accountable to the public, not only to render just and reasonable decisions in the courtroom, but also to operate efficiently and economically. Unlike many circuit courts in Michigan, our circuit court judges do not each have their own personal secretary, court clerk, court reporter, and law clerk. Instead, our circuit court judges share staff and utilize technology to help reduce the number of people required to operate the Court, thereby reducing personnel costs. The Court also works closely with the County of Ottawa, our funding unit, to coordinate staffing, equipment purchases, and the use and integration of technology. Consistent with the economic philosophy of the citizens of Ottawa County, the circuit judges operate the Court in a manner that maximizes the saving of taxpayer dollars.

However, saving dollars is not enough. In addition, the circuit court judges have adopted performance measures with which the general public can evaluate the Court’s operation and progress, or lack thereof, towards stated goals. Many have heard of the *Dashboard* instituted by Governor Snyder. The circuit court judges are instituting a *Court Dashboard* through which the public can evaluate the Court’s progress toward those goals. The circuit court judges are working closely with Ottawa County to display the *Dashboard* on the County’s website, www.miottawa.org.

These performance measures include objective goals for the prompt disposition of cases within the time frames mandated by the Michigan Supreme Court, plus the efficient collection by the Court of fines and costs levied in cases adjudicated by the circuit judges. The Court's performance on subjective criteria is assessed by the use of surveys completed by parties, attorneys, employees, and the public. These surveys are designed to measure whether or not the Court's staff is courteous to the public, whether the staff uses time in an efficient manner, and whether the overall impression of the Court that is gained by those who come before the Court is favorable or unfavorable. Of course, these surveys are not designed to measure an individual party's satisfaction with the outcome of a specific case. Rather, they are designed to evaluate the public's impression of the Court and to improve Court's operations as a whole.

Your circuit court judges are committed to achieving justice efficiently and economically. It is our hope that the Court's transparency will increase the public's awareness and confidence in the third branch of government.

YOUR OTTAWA COUNTY CIRCUIT COURT—EMBRACING POSITIVE CHANGE (Kevin Bowling)

We all know that traditions are difficult to change—sometimes for good reason. However, when traditional ways of doing things cause unnecessary delay or fly in the face of common sense, change must be considered. The Ottawa County Circuit Court judges recognize that there are many ways to improve both process and procedure. Again, many

the case had been concluded, which is quite unlike the manner in which the vast majority of people make important decisions. The Ottawa County Circuit Court has implemented this new rule. Once again, post-trial interviews with jurors confirm that the jurors approve of this new rule. In these interviews, the jurors stated that discussions with their fellow jurors afforded them the opportunity to clarify the testimony of the witnesses and appropriately compare or contrast that testimony with other evidence. These post-trial interviews indicate that this change in the rules assisted the jurors in their decisional process. Interestingly, these favorable comments were made both by those jurors who had previously served on criminal cases which, by law, are still governed by the old no-discussions-during-trial rule, and first-time jurors, who were not aware of the old rule.

The Michigan Supreme Court will soon decide whether to permit jurors in criminal cases to courts and judges are reluctant to make changes, especially when those changes involve jury trial procedures. Judges and attorneys have always expressed faith in the jury system. But, at the same time, some of the rules that govern jury trials which have developed over time have arguably impeded the jury from performing its duty. The circuit court judges are open to changes that streamline and improve the jury's decisional process.

Recently, the Michigan Supreme Court adopted new rules for jury trials. These new rules allow jurors greater access to information and permit jurors to have greater input into the trial process. One of these new rules permits the judge- in both civil cases and criminal cases- to tell the jury, prior to the presentation of evidence and argument, the law that applies to the case and the issues that the jury must decide. Previously, the jury was not told the law that applied to the case or the issues that the jury was to decide until after evidence and argument had been presented. Thus, the jurors did not know what to look for until after the attorneys had presented the

case. The circuit court judges have implemented this rule and the other the new rules authorized by the Michigan Supreme Court. Recent post-trial conversations with jurors in both civil cases and criminal cases have indicated that this new rule was vital in helping the jurors focus in on the issues.

Another new rule permits jurors in civil cases to engage in discussions with their fellow jurors about the case while the case is being tried. Previously, jurors in civil cases were not permitted to talk to anyone, including their fellow jurors, about any aspect of the case until engage in discussions with their fellow jurors during trial as jurors in civil cases are now permitted to do. Soon, jurors in all cases, both criminal and civil, may have the option of having these discussions with their fellow jurors.

These two new rules- the rule that permits a judge to tell jurors both in civil cases and in criminal cases the law that applies to the case and the issues that the jury is to decide, and the rule that permits jurors in civil cases to engage in discussions with their fellow jurors during the course of the trial- are among the many new rules for jury trials that took effect only a few weeks ago. The Ottawa County Circuit Court judges strongly believe that these new rules will improve both the jurors' decisional process and their confidence in making the difficult decisions that our system entrusts to them. Your Ottawa County Circuit Court judges are committed to continuous improvement of the operations of the Court and to ensuring that equal justice under law is rendered in all cases.

GOVERNOR APPOINTMENT TO MICHIGAN COMMITTEE ON JUVENILE JUSTICE

Sandi Metcalf, M.S., Director of the 20th Circuit Court, Juvenile Services Division, was recently appointed by Governor Rick Snyder to the Michigan Committee on Juvenile Justice (MCJJ). Her appointment reflects her thirty-eight years of experience within juvenile justice, a continued passion for the juvenile courts, and a sincere commitment to the advocacy for the youth and their families served by the courts. In addition to her duties as Director of Juvenile Services for the 20th Circuit Court, Ms. Metcalf has been the project manager for the statewide Juvenile Justice Vision 20/20, a grant funded initiative which goals are to evaluate the juvenile justice system and develop a strategic plan or action agenda for juvenile justice in Michigan. The result of this initiative has been a renewed excitement throughout the state to preserve the juvenile court's original core tenets in Michigan, focusing on improved services and administration of justice for all.

The MCJJ's Mission is "To advise the Governor on matters related to juvenile justice legislation and administration, to mobilize communities to develop and implement prevention services, and to create a strategic plan that sets standards, determines priorities and allocates funds for successful delinquency prevention and rehabilitative program". This year, Governor Snyder has re-tooled the Committee to also include an advisory role responsibility to the Director of the Department of Human Services. To date, full membership of the new Committee has not been announced and is anticipated soon.

The MCJJ is also the State Advisory Group for Michigan which functions as the Juvenile Justice Grant Unit, directed by federal mandates. Currently, MCJJ funds delinquency program initiatives related to community policing, community reintegration, gender specific (female) programs, community based programs, prevention, minority over-representation, and disproportionate minority contact programs. It also monitors state compliance

of the Office of Juvenile Justice and Delinquency Prevention's Core Requirements and tracks data related to juvenile offense trends and other juvenile justice specific issues.

MSU Extension mentee speaks at Mentoring Day Capitol event

EAST LANSING, Mich. – "I know what I want to do in my future, and I have a plan," said a mentee from the [Michigan State University \(MSU\) Extension](#) 4-H Tech Wizard Program.

Gov. Rick Snyder declared January as [Michigan Mentoring Month](#), an opportunity to recognize the significant impact mentors have on today's youth.

15-year-old Katie Wolters shared her experiences during Mentoring Day at the Capitol on Friday in Lansing, Mich. Katie became involved with MSU Extension's 4-H Tech Wizards program in Ottawa County after struggling to succeed in her former school.

"This experience really helped me learn how to get along with new people," said Katie. We (my mentor and I) realized we could have a lot of fun together."



15-year-old Katie Wolters from Ottawa County speaks at the State Capitol in Lansing, Mich. on Mentoring Day, Friday, Jan. 20, 2012, in recognition of Michigan Mentoring Month. Katie spoke of her achievements since becoming a mentee in the 4-H Tech Wizards program. To the left, Tony Campbell, co-chair of Mentor Michigan Leadership Council and vice president for Community Investments at the Heart of West Michigan United Way. Photo taken by Lisa Bottomley.

4-H Tech Wizards is a national 4-H Program of Distinction with demonstrated success. The program utilizes small group mentoring to engage at-risk youth in science, technology and engineering activities. Both mentors and youth gain positive relationships while learning job skills and engaging in hands-on experience in the fields of science, technology, engineering and mathematics.

"I've had so many great experiences with my mentor," said Katie. "We've taught elementary students about

biofuel by mixing tons of different ingredients together, we built water rockets and launched them and we have gone window shopping and had fun laughing at the latest fashions together.”

Katie shows strong leadership skills and is one of the first to step up to volunteer in her community. Katie will attend Zeeland High School and plans to study for a future career in the criminal justice field.

4-H Tech Wizards is a [Michigan 4-H](http://www.4h.msue.msu.edu/4h/mentoring) program through MSU Extension. For more information on mentoring in Michigan, visit www.4h.msue.msu.edu/4h/mentoring.



Lt. Gov. Brian Calley (left) poses with Katie Wolters, mentee of the 4-H Tech Wizards Program, on Mentoring Day, Jan. 20, 2012, at the Michigan Mentoring Capitol event in Lansing, Mich. Katie spoke at the Capitol in recognition of Michigan Mentoring Month. Photo taken by Lisa Bottomley.

ASSET MANAGEMENT LEADER AWARD

As previously mentioned in the Digest, the Ottawa County Road Commission was awarded the 2011 Organization Asset Management Award from the Michigan Transportation Asset Management Council. The Road Commission was nominated by Don Disselkoen and Roger Safford, MDOT Grand Region Director. Don thought it would be good to include the actual article from The Bridge magazine in the Digest. ([click here](#))

Asset Management Leaders Recognized

Awards announced out at the 2011 Michigan Transportation Asset Management Conference

Carmine Palombo, transportation director at the Southeast Michigan Council of Governments (SEMCOG) and chair of the Michigan Transportation Asset Management Council (TAMC), opened the 2011 Transportation Asset Management Conference in May with a nod to local agencies. "I want to thank all of you for your passion and involvement," Palombo said. "Michigan's asset management program doesn't work without your participation." The program, which is based on collecting condition data for 37,500 miles of roads that are eligible for federal aid in Michigan, allows the TAMC to communicate more clearly with lawmakers when discussing road funding. Last year was the seventh year of data collection by state and local transportation agencies.

In 2009, the TAMC established an awards program to formally recognize individuals and organizations each year that exemplify the mission of the Council, which is "...to expand the practice of asset management in order to enhance the productivity of investing in Michigan's roads and bridges."

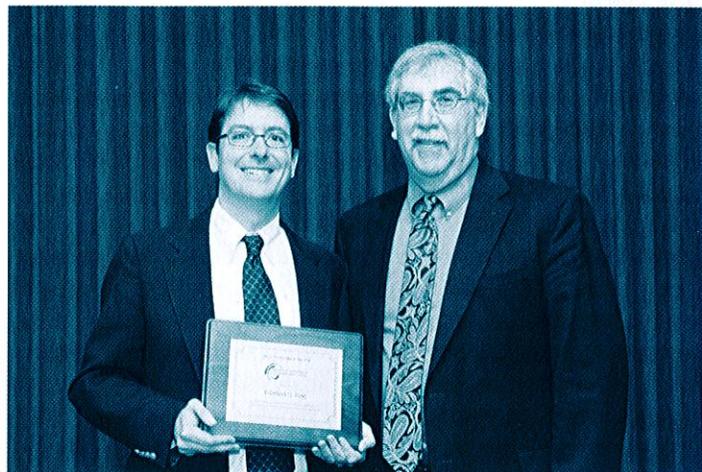
The winners are . . .

Ed Hug, SEMCOG transportation planner, won the Individual Achievement in Asset Management Award. Presenting the award, Palombo explained that Hug works with over thirty units of local government in Southeast Michigan to help them use road condition data to develop asset management plans. "He also demonstrates leadership through his involvement in data collection efforts, and by participating in regular meetings and training events," Palombo said. "We appreciate Ed's consistent and persistent efforts to promote asset management principles in Southeast Michigan and across the state."

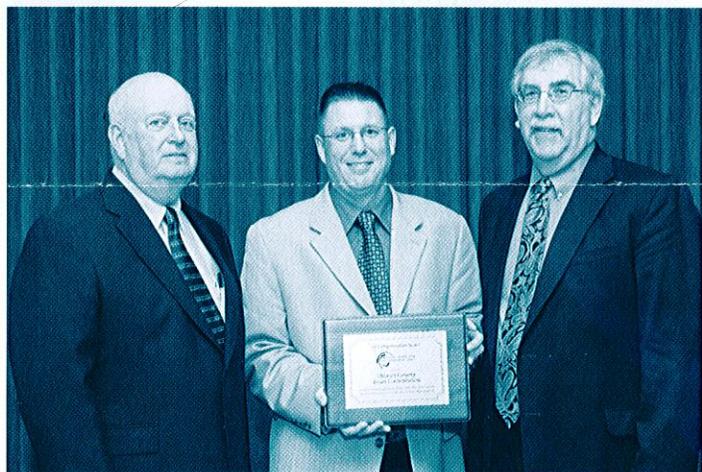
Ottawa County Road Commission (OCRC) won the Organizational Achievement in Asset Management award. "Through their development of a comprehensive Strategic Improvement Plan, Ottawa County Road Commission has provided a great model for implementing asset management principles," Palombo said. "In addition to identifying transportation assets, the plan also helps identify improvement needs, determine sources of funding, and inform the public about the situation every step of the way. This is a great example of how to put all the pieces of the asset management puzzle together."

Presenter and award winner

Brett Laughlin, engineering director at OCRC, not only accepted the award on behalf of his organization, but also gave a presentation earlier in the day to summarize how they put together their asset management plan. Of particular interest in Laughlin's presentation was a statistic he shared to communicate the importance of using asset management principles to manage roads. "In the early 1990s we could resurface one mile of asphalt road in Ottawa County for 30 thousand dollars," he said. "Today that same mile of road would cost about 90 thousand dollars to resurface. Costs are going up, revenues are decreasing. An asset management plan helps us better manage our needs with the dollars we have."



Ed Hug (left), transportation planner at SEMCOG, accepts the 2011 Individual Asset Management Award from Carmine Palombo, chair of the Transportation Asset Management Council.



Brett Laughlin (center), engineering director at Ottawa County Road Commission and Dave Vander Kooi (left), Ottawa County Road Commissioner, accept the 2011 Organization Asset Management Award from Carmine Palombo, chair of the Transportation Asset Management Council.

A video recording of Laughlin's presentation and six others from the conference are available on the Michigan LTAP web site at: www.michiganltap.org/workshop/materials/2011TAM.

Getting involved

Palombo appreciates the exchange of information and ideas that takes place at the annual conference. "We have a bigger crowd every year and that means more agencies are doing more with asset management," he said. "But we want it to grow more."

To learn more about asset management in Michigan, including how to submit a nomination for a future asset management award, go to the TAMC web site at www.michigan.gov/TAMC.

A fall session of the Asset Management Conference is scheduled for October 26 in Escanaba. Complete details will be distributed in early September. 

Managing roadside trees to reduce danger to motorists

Reprinted with permission from the Spring 2011 issue of *Moving Forward*, a quarterly newsletter published by the Pennsylvania LTAP center.

Low-hanging branches, diseased or dead limbs, and trees too close to the road are some of the natural hazards facing motorists. To reduce the danger of trees in the right-of-way and to lower liability risk, county road crews and public works departments must know how to effectively manage trees and keep them from becoming roadside dangers.

"Agencies will also want to reduce their exposure to lawsuits that may occur as a result of a tree failure or some real or imagined negligent act," says Scott Diffenderfer, a board-certified master arborist with Good's Tree Care, Inc., in Harrisburg, PA.

A properly designed roadside tree care plan should include provisions for tree maintenance, tree risk analysis, and tree removal. An effective tree management program should include the following best practices:

Regularly inspect trees, document your findings, and follow up with action. Tree inspections should be an important part of an agency's tree management program. After recording your findings, it is important to follow up with the most appropriate action, whether it is removing dead or diseased trees and limbs or trimming low-hanging branches and cutting down trees that are too close to the road.

"By taking these small steps toward developing a tree risk plan, your agency will minimize its exposure to risk," says Diffenderfer.

Properly prune and trim trees. Trees respond better to selective and well-planned pruning rather than blanket cutting with a boom or flail mower. Such blanket treatment can damage the trees and may lead to disease, insect infestation, and even tree mortality, says Diffenderfer.

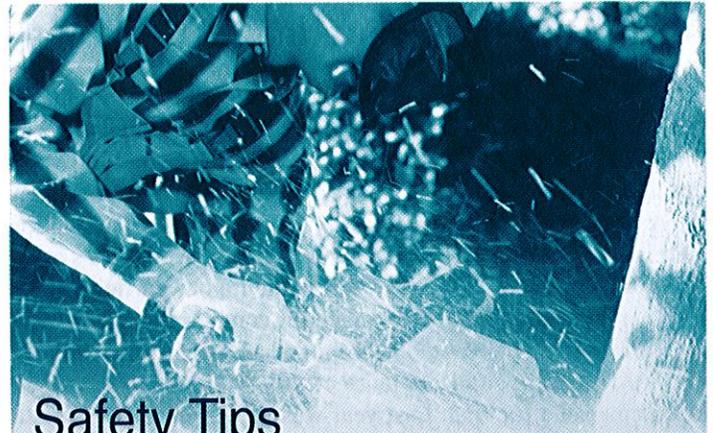
"Proper trimming may ultimately be cheaper for your agency since trim cycles can last longer than boom mowing," he says.

Keep your workers safe. Everything about roadside tree care has an associated hazard or safety concern, says Diffenderfer. To minimize risk, employees should be properly trained on equipment safety and traffic control. (See "Safety Tips" sidebar, right.)

Consider your budget. The most cost-effective roadside tree program can be developed in-house by agency staff and managed as part of the road crew's work schedule. If the budget allows, a consulting arborist can offer a range of expert services from assisting with the preliminary steps to fully developing and managing the plan. Other options are to seek consulting help from volunteers in the community who have experience with tree management or to establish a shade tree commission to implement and manage a tree care plan.

Finally, before a tree management program can be implemented, it is important to make sure your local elected officials are on board and have agreed to the breadth and depth of the plan.

"If done right, the cost for annual roadside tree maintenance will drastically reduce over the five- to seven-year period for which a plan is typically designed," says Diffenderfer. "Ultimately, the savings for reducing any risk associated with right-of-way trees cannot be overlooked." 



Safety Tips for Chain Saw Operators

Whether you're cutting down a tree too close to the road or clearing a limb that fell across the roadway during a storm, local agency road crews must make safety a top priority. Here are some safety tips from a professional tree feller:

Become familiar with the chain saw and keep it in optimum condition. Know how your chain saw works, what it sounds and feels like, and what it's designed to do. Be sure the chain saw is properly sharpened and tensioned, and if it's not performing properly, get it adjusted or repaired. "A dull saw chain means more work pushing and often pulling on a saw to get the task accomplished," says Tim Ard of Forest Applications Training, Inc. "Workers fatigue, their productivity is reduced, and most importantly safety is compromised."

Wear personal protective equipment. Workers should always wear safety goggles, a hard hat, earplugs, and closed, protective shoes when operating a chain saw. Nonslip gloves are also recommended.

Learn how to sight to place the tree where you want it. An operator should use the felling sights on the chain saw to aim the tree's fall. Stand behind the sight line, and aim the tree toward the target before you start the face notch cut.

Keep the wood hinge attached to the falling tree. The hinge provides the cutter extra reaction time and control in a variety of sawing scenarios. "Many incidents, fatalities, and injuries occur when saw operators cut the hinge off and stay with the tree too long as it falls," Ard says.

Plan an escape route. Developing an effective retreat route involves clearing debris and other obstacles in the area, removing low-level branches, preparing an escape path opposite the direction of the fall and at a 45-degree angle, and then using it. "Injuries and fatalities are often caused because saw operators or onlookers are not far enough away from the stump of the tree when the tree or its limbs are falling," Ard says. "Plan your retreat path thoroughly."

For more detailed safety information, please visit the OREGON® Blount Inc. web site:

www.oregonchain.com/pro/service/precautions

Working Together to Improve Roads and Bridges

MDOT aims to help local transportation agencies use Context Sensitive Solutions

by Brad Peterson, L.L.A., Landscape Architect and CSS Coordinator – Michigan Department of Transportation

The Michigan Department of Transportation (MDOT) has embraced the Context Sensitive Solutions (CSS) approach to project delivery as a way of delivering on its mission to “provide the highest quality integrated transportation services for economic benefit and improved quality of life.” To encourage CSS at all levels of transportation delivery, MDOT actively promotes partnerships with local governments, state agencies, businesses, and community groups. This effort provides local transportation agencies access to MDOT staff for CSS assistance throughout project development, construction, and maintenance activities. In the end, CSS creates transportation solutions that more thoroughly meet the needs of more transportation stakeholders.

The CSS approach that MDOT shares with local agencies consists of three fundamentals: Stakeholder Engagement, Flexibility, and Effective Decision-Making. Within the Department, CSS

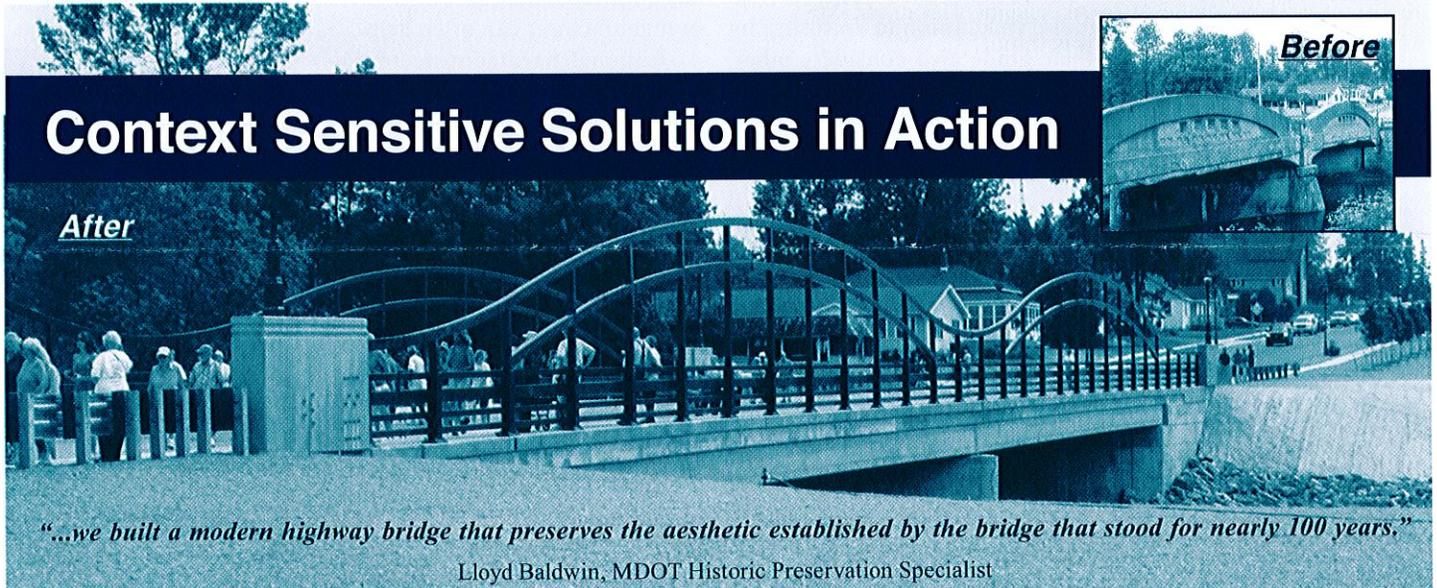
fundamentals have been a part of staff training since 2005. As a companion to the formal training, MDOT is currently working on tools to assist staff in the region offices to address local community needs and to help build partnerships.

MDOT staff in Lansing and in the the Region offices are available to assist local transportation agencies with stakeholder engagement activities for their projects. are available to assist local transportation agencies to conduct stakeholder engagement activities for their projects. The major issues facing project managers are:

- When should I start the engagement process?
- How do I identify all stakeholders?
- What professional expertise do I need? Special skill sets?
- What kind of engagement is needed on my project and how do I make this determination?
- How do we maintain a consistent stakeholder engagement process statewide, while remaining flexible enough to respect local context and concerns?

See CSS on Page 7

Context Sensitive Solutions in Action



“...we built a modern highway bridge that preserves the aesthetic established by the bridge that stood for nearly 100 years.”

Lloyd Baldwin, MDOT Historic Preservation Specialist

The M-32BS Bridge over the Thunder Bay River in Hillman, MI, was built in 1922 from Michigan State Highway Department plans. The concrete camelback through-girder design was developed by C.V. Dewart, the department’s first professional bridge engineer, and was improved upon by C.A. Melick, Dewart’s successor. This bridge type was popular through the 1920s but was virtually eliminated from the engineer’s toolbox by the early 1930s.

The bridge was proposed for replacement beginning in the mid-1990s. Years of harsh environmental conditions were taking their toll. In addition to deterioration, the overall design was also problematic. The narrow deck width

caused problems for large trucks, and the thick camelback girders and railings created sightline issues for motorists on adjacent side roads.

Since the bridge was eligible for inclusion on the National Register of Historic Places (NRHP), alternatives other than replacement had to be considered. Locals expressed fondness for the camelback design, but overwhelmingly wanted a new bridge. Ultimately it was determined that replacement was the most prudent and feasible alternative because widening was structurally impossible. Also the engineers were not confident that new concrete would bond sufficiently with the existing concrete.

The recommended design incorporated the serpentine look of the camelback but

provided open railings that enhanced the riverine setting and improved sight lines for motorists. “Village residents were active in public meetings to voice concerns and discuss options,” said Michigan Department of Transportation Historic Preservation Specialist, Lloyd Baldwin. “They also selected the final design.”

“I was very impressed by the community’s involvement and leadership,” Baldwin continued. “With their help we built a modern highway bridge that easily accommodates vehicles and pedestrians, enhances views of the surrounding area and preserves the aesthetic established by the bridge that stood for nearly 100 years.”

Hardfacing from Page 1

Saving money

Washtenaw County Road Commission (WCRC) has been reaping the benefits of hardfacing for several years. According to Maintenance Supervisor, Bob Berger, the WCRC employs hardfacing on their road grader's tool bit holders and their underbody scrapers with great results. "Hardfacing extends the life of our ground extending tools," Berger said. "This is essential for us because in Washtenaw we use limestone for our roads which is extremely hard when compacted. Even though the hardfacing wire is guaranteed to extend a part's life by a factor of one or two, we've found that applying hard surfacing to our tool holders has extended their working life by five to ten times." For WCRC, that increase in service life translates into significant cost savings on tool replacements. "It's definitely much less expensive," said Berger. "Especially when you consider it costs \$2500 to replace one set of tool holders, and only \$165 for the wire that can hardface three sets."

If you want to know what kind of savings hardfacing could have for your applications, an easy way to calculate cost-effectiveness is to use Postle Industries' step-by-step *Economics of Hardfacing* guide. In addition to factoring in labor and materials costs, their guide also considers other possible costs like flux, shielding gas, power, and overhead to give you an accurate total estimate. The guide also contains various examples and explanations that can help you determine whether hardfacing is a good option for a given component.

You can view or download this guide and other useful hardfacing information from Postle's website: www.postle.com.

Getting started with hardfacing

Hardfacing can be deposited through various welding processes, but keep in mind that due to base metal and alloy heat ranges, welding positions, and area coverage, not all processes work for every hardfacing job. The most commonly used hardfacing processes are Shielded Metal Arc Welding (SMAW), also known as stick welding, and Gas Metal Arc Welding (GMAW or MIG).

If you are thinking about getting started with hardfacing, but you're not sure where to start, take a look at one of the many hardfacing guides available online. Welding consumable manufacturers and distributors often have their own guides to correspond with their unique alloy specifications. One guide that explains hardfacing concepts and techniques in-depth is the Afrox Hardfacing guide. Other guides like the Stoodly Hardfacing guide, the Lincoln Hardfacing guide, and the Navy Welding Materials Handbook may also be helpful. If you have any questions about hardfacing, your hardfacing alloy supplier or manufacturer can often help.

Although hardfacing techniques and processes vary with the unique conditions of each hardfacing job, the result is often the same: a component more resistant to wear that can reduce part replacements, premature repairs, and unnecessary equipment downtime. 



A hardfacing tip from a pro

"After determining the location and pattern for hardfacing, the most important thing is to make sure you spread out your beads as you apply them. If you apply hardfacing beads too close together you're going to overheat the base metal, which will change the metal's properties and ruin it."

Tom Cook, Welding Instructor



Attendees of an Advanced Maintenance Welding workshop at Muskegon County Road Commission gather around as instructor Tom Cook (white shirt) prepares to demonstrate a welding technique. Sessions of the LTAP-sponsored workshop were also held at Clare and Livingston County Road Commissions in early June. Vinnie Dahlberg (inset, right), a mechanic at Livingston County Road Commission appreciated Cook's practical teaching style. "This was great hands-on training," Dahlberg said. "The tips and tricks that Tom shared were based on years of real-world experience. You can't get this kind of training in a classroom or from reading a book."