SADES: STATEWIDE ASSET DATA EXCHANGE SYSTEM

On the Road to High Tech Record Keeping

by Stephanie Cottrell

Not too long ago you may remember a story about a new pilot program (SADES) that set out to establish a primary transportation inventory of assets including a maintainable condition assessment process for many state and local agencies. SADES is a unique approach to statewide asset management that efficiently utilizes modern technology and joins efforts for the common good of accurate and sustainable data collection.” explains Project Manager, Christopher Dowd. Executive Director, Charles Goodspeed adds that SADES is “a partnership consisting of all public sector agencies with responsibilities related to transportation assets. It is simply an infrastructure to facilitate data management.”

While the Technology Transfer Center (T2 Center) has made asset management software packages available for over 25 years, “there were three hurdles that had to be addressed to obtain user support prior to actually creating SADES: 1. Identification of a data acquisition labor force, 2. Sustainability of the data, and 3. Appropriate data acquisition hardware,” admits Goodspeed. With these obstacles identified, a bigger issue that faced the team was convincing the end users of the change. Each agency and municipality has had its own established methods of collecting data for years and the users of those methods are familiar and comfortable with them. It is difficult to persuade people who have an established system that this new one is “better”, says Dowd. Pair that with the painful fact that some agencies across the state are still
Letter from the LTAP Director

We are happy to introduce Stephanie Cottrell, who joined us in January as the new Training Coordinator for the LTAP and SADES programs. She jumped in with both feet, and has very quickly become an incredible asset. Her work ethic is commendable, her laughter is infectious and her energy levels are off the scope. But most importantly, she immediately connected with everyone here, which is so important when you have such a small staff. She is a very welcome addition to the team!

In other news, we are in the midst of our Spring Session, which runs through the middle of July. We tried to have a variety of workshops in varied locations, from Pavement Preservation in Milford to a Green SnowPro workshop in Grantham, with many in between. If you are interested in seeing what workshops are still coming up, and/or to register for one, please see the list at t2.unh.edu/training-calendar.

As June starts we will be starting to put together our Fall Session, which will start the third week of August. If there is a workshop you would like to see, or a location you know is available, please let me know and I will try to work with you. I can't promise everything, but I appreciate receiving suggestions and try to work with them when I can. We would like to publish the initial calendar for the Fall Session in late June and will let everyone know when it is posted.

Lastly, I want to commend all of the public works departments across the state for the incredible job they did this past winter in keeping the roads clear and safe for everyone. I was continually amazed at how quickly things were back to “normal” and believe that all municipalities deserve a well earned thanks. Perhaps the best thanks is that the snow is finally gone, and we can enjoy Spring!

Amy Begnoche
LTAP Director
Technology Transfer Center
SADES

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not equipped with modern technology, the team had substantial barriers to climb.

Changes in technology aligned to overcome these hurdles. ESRI (a geographic information system company) software allows anyone with a smart phone or tablet to have access to the asset management database. Hardware in the form of iPads, with its economical price tag, allows portability of this software to even the most faraway places and is an affordable gateway for those agencies with little technology. The SADES program will also offer their 11 iPads at no cost for use via a sign out registration platform to all participating agencies and municipalities.

Another element that propelled the innovation of this database system was the economic downturn which forced agencies to find ways to cut costs while improving efficiency, accuracy and comprehension in the dwindling workforce. Today’s need to do more for less, the shortage of tax dollars and alternatives to the hurdles -stated above- initiated the interest in SADES. In the past three years SADES has grown to include 5 state agencies, managing 2 assets (culverts and sidewalks) and by the summer of 2015, four more will be added (roads, signs, bridges and guardrails),” says Goodspeed.

Pilot Program Outcome with A Look to the Future

The pilot Team was trained in the use of the newly established system with the iPad Mini’s in May of 2014. From there, they began collecting data using 139 unique culvert attributes utilizing the host systems, ESRI ArcDesktop and ArcOnline on the newly acquired Apple iPads. “Before the pilot collection was complete, we had already begun looking at other asset data to collect,” says Dowd. “In only 3 months of data collection, 1,020 culverts were inventoried throughout the entire state. Adding in historical data from NHDES we managed to populate the SADES map with 2,097 culverts in only 5 months” of the launch date.

In the months that followed this pilot’s conclusion, the Team worked toward developing and expanding the assets and inventory data collection along with the ranges of criteria to include several types pedestrian infrastructure. This comprised of sidewalks, crosswalks, and down ramps.

The plan for 2015 is to continue collecting more culvert data, work on launching the pedestrian assessments, and hopefully to launch two more assessments, Road Surface Management System (RSMS) and Guardrails.

A Breakdown in the Benefits of Using SADES as a Tool for Asset Management

Sustainability: This data remains stored on a shared server on the “cloud”. Once it’s collected, the data remains on this server and can be accessed anytime and from anywhere for any analysis purposes.

Efficiency: With the touch of a finger, the user can easily fill in the attributes using the ESRI application where the data is then instantly submitted, or uploaded, to the server on the cloud. This means no errors due to transfer of data from paper into a computer database. And there is no duplication of efforts as no two agencies are collecting the same data. Every agency involved is contributing its own assigned data towards a common goal of having a central database.

The SADES pilot team, consisting of the New Hampshire Department of Environmental Services (NHDES), Regional Planning Commissions (RPCs) and the T2 Center, developed a plan that determined which partner would contribute which data to the project. “It was, and is, important to define each partner’s role in the project so that all aspects are covered,” Dowd states. Initially, the program’s asset data collection focused on culverts using an established set of standard definitions and criteria, with the goal of facilitating a progressive rather than responsive approach to highway rehabilitation and maintenance. The Team wanted to be able to better capture the historical asset information of these culverts in order to plan what future repair and care needs would be. Doing so will allow for more effective budget planning for the state and municipal highway departments.

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Currently, the numbers look like this:

<table>
<thead>
<tr>
<th>Asset</th>
<th>Quantity</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culverts</td>
<td>2097</td>
<td>139</td>
</tr>
<tr>
<td>Sidewalks</td>
<td>1021</td>
<td>27</td>
</tr>
<tr>
<td>Crosswalks</td>
<td>336</td>
<td>21</td>
</tr>
<tr>
<td>Curb Ramps</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>RSMS</td>
<td>-</td>
<td>29</td>
</tr>
<tr>
<td>Guardrails</td>
<td>-</td>
<td>32</td>
</tr>
</tbody>
</table>

With the state agencies and RPCs chomping at the bit to add assets and establish more comprehensive criteria to SADES, the future of this program looks bright. Dowd shares “We’d really like to expand our reach of SADES... attaining other interested parties and investigating which assets have the strongest interest.” He and Goodspeed feel strongly that this database system would benefit local municipalities as well as other state agencies.

Financial support has been granted for the next 2 years to support SADES. “SADES will continue to advance on the coat tails of hardware evolution. Software will have to be updated per hardware advances, but the nice thing about SADES is it is built in an environment that is expected to be sustainable.” Goodspeed declares.

For more information on the SADES program, please contact Chris Dowd at 603-397-7745 or nht2gis@icloud.com
To schedule training, please contact Stephanie Cottrell at 603-862-2826 or stephanie.cottrell@unh.edu

By 2020, Goodspeed believes that SADES should be fully developed and a functioning part of all partners’ daily tasks and responsibilities. ~

Map of the culverts that have been cataloged

**10 THINGS CONSTRUCTION LEADERS CAN LEARN FROM DWIGHT D. EISENHOWER**

by Tom Jackson
Equipment World, September 30, 2013 edition

The trouble with most management and leadership books crowding the shelves today is that many of them were written by people who’ve never managed anything bigger than their own publishing enterprises. I prefer biographies. And one of the best biographies I’ve read in many years is Eisenhower: In War and Peace, by Jean Edward Smith. So what can construction company owners and executives learn from reading about Eisenhower? Plenty. Here are 10 key lessons:

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NEW HAMPSHIRE ROADS SCHOLARS

In the past several years, the NH Technology Transfer Center has shifted our focus slightly, and we now offer less workshops in the Technical subjects, with more of them oriented towards Safety and Environmental topics.

Additionally, we have noticed that individuals in our Roads Scholar Program work very hard to get to the level of Master Roads Scholar, and then they only attend one workshop here or there or not at all. Therefore, we have decided to make the following changes and additions to the structure of our Roads Scholar Program, effective with the start of our Spring Session:

<table>
<thead>
<tr>
<th>Level</th>
<th>Contact Hours</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roads Scholar 1</td>
<td>25</td>
<td>(no change)</td>
</tr>
<tr>
<td>Roads Scholar 2</td>
<td>50</td>
<td>20 hours of Technical</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 hours of Safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 hours of Supervisory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 hours of Environmental</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 additional hours</td>
</tr>
<tr>
<td>Senior Roads Scholar</td>
<td>75</td>
<td>(no change)</td>
</tr>
<tr>
<td>Master Roads Scholar</td>
<td>100</td>
<td>(no change)</td>
</tr>
<tr>
<td>Master Roads Scholar 2</td>
<td>150</td>
<td>75 contact hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>receipt of Safety Champion Award</td>
</tr>
<tr>
<td>Advanced Master Roads</td>
<td>200</td>
<td>200 contact hours *</td>
</tr>
<tr>
<td>Scholar</td>
<td></td>
<td>(brand new)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*The parameters for the Advanced Master Roads Scholar are still being worked out, but it will likely include helping the T2 Center in some capacity, for example, instructing workshop. If you are close to this many hours, we will work with you to determine how this level can be achieved.</td>
</tr>
<tr>
<td>Safety Champion **</td>
<td>20</td>
<td>20 hours of Safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*This is a side award given once a recipient achieves 20 Safety hours, regardless of what Level he is in the Program. Once the individual gets to 150 hours, this begins to count towards Roads Scholar Levels as noted in Master Roads Scholar 2.</td>
</tr>
</tbody>
</table>

We are also introducing the following:

- **Safety Champion **
  - 20 hours of Safety

Please note that if you achieved a Level prior to this change, you will still be at that Level even if you don’t have the correct hours. (I.e., you are a Level 2 but don’t have 10 hours of Safety.) We are not making this change to penalize people, but to better serve the people who attend our workshops. If you now qualify for a Level that you didn’t before, you will receive your Certificate and Award at the next workshop you attend.

If you are interested in signing up for upcoming workshops, our current training calendar can be found at http://t2.unh.edu/training-calendar. We look forward to seeing you soon!

Amy, Butch, Stephanie and Charlie
EISENHOWER
Continued from page 4

1 Physical Fitness Helps You Survive:
Mental stress eventually takes a toll on your body. The tension and pressure, the 18 hour days and responsibilities of planning for D-Day might have crushed a weaker man than Eisenhower, seen here playing a bit of football. He’s on the front row, second from the right.

2 Leading Means Listening: Reading how Ike formulated strategy and made decisions, you almost get the impression he had no opinions or thoughts of his own. Ike surrounded himself with the smart and capable men and then he let them hash it out as a group. He convened the discussions, he laid out the problem, and he kept his people focused. He was usually the smartest guy in the room, but most of all he listened. In politics, where many military men stumble, Ike’s collaborative management style only got better, more personable and more successful.

3 Get Your Personality Out Of The Way: According to aides, in private Ike had a volcanic temper. He undoubtedly had a good size ego too. But in public, in meetings, in any official capacity, he was calm, even keeled and self-effacing. He wouldn’t suffer fools gladly, but he never engaged in drama, one-upmanship or shouting matches.

4 When You Set A Red Line, Make It Stick: Truman ordered the military to desegregate late in his presidency and nothing much happened, the military balked. Ike ordered it and six months later military desegregation was a done deal. When the governor of Arkansas refused a federal court order to desegregate that state’s schools in 1957, Ike gave him every opportunity to save face. But when he didn’t comply, Ike sent in the 101st Airborne—locked and loaded. He was not one to trifle with.

5 Cultivate Good Friends: For being a rawboned kid from a poor Kansas family Ike had an uncanny ability to figure out who mattered and who didn’t, who could help him and who would not. He was just one of a dozen or more capable generals when WWII broke out, but when the question was raised as to who would lead the Allies in Europe, the choice was quick and unanimous. Ike was the man. Even Churchill agreed. After the war, Ike sought the friendship of business leaders. He started out with an occasional poker game and a small circle of influential men, a chance for all of them to blow off steam and escape from their pressure-cooker lives. But as Ike moved into politics he reached out more and more to his poker buddies for advice and support. The end result was that Eisenhower had more business people in his cabinet and a better economic record than any president since.

6 Know Your Role: Ike’s critics say that he never put himself in harm’s way, he never had that eye opening experience of having a bullet whiz buy his head. All true, but as much as Ike would have liked to command troops in battle, he knew his job was to manage the war, not fight it. His place was headquarters, not the field. He knew that a photo-op of him on the front lines was hardly worth the damage to morale and public opinion should he get killed or gravely injured in such a stunt.

7 Keep The Common Touch: The GI’s loved Ike. The British public adored him, and he drew bigger crowds than any of their own generals when he spoke. Late in the war Ike’s son John Eisenhower graduated from West Point and was sent to the European theater. John wrote to his famous father before he arrived and asked if he had any advice. His dad’s reply was short and simple. As soon as you get here, Ike said, walk around and see what the sergeants and enlisted people are wearing. Then dress like they dress. In other words, if they wear cheap boots, you wear cheap boots. The American public knew Ike was the real deal, a genuine man of the people, and he won the White House easily two times. His opponent Adlai Stevenson, was smart and capable, but by contrast came across as aloof and intellectual.

8 Don’t Avoid Emotionally Difficult Situations: He didn’t have anybody line them up in formation for inspection. He didn’t give a speech or make a show. He just walked from group to group and started talking, about football, about home, the sorry state of Army

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OSHA New Reporting Requirements

Beginning January 1, 2015

By Ronald D. Ciotti, Esq. / Hinckley Allen
New Hampshire Highways Magazine/Winter 2015

On September 11, 2014, OSHA issued new regulations that will change the reporting requirements for workplace injuries and fatalities. These changes will significantly affect contractors. The new reporting requirements become effective on January 1, 2015. (By contrast, OSHA’s existing record keeping obligations—including Forms 300, 301 and 300A for covered employees—remain. ut, OSHA did designate additional employer classifications that will be required to maintain these OSHA records.) The new reporting requirements will dramatically increase reporting to OSHA about threshold injury and illness and will significantly increase the likelihood of an OSHA inspection after an onsite accident, injury, or illness. The new regulations will institutionalize the local practice of first responders contacting OSHA when responding to a workplace incident.

Overview

Subject to certain limitations listed below, under the new reporting requirements, an employer is now required to report (1) an employee fatality resulting from a reportable work-related incident; (2) any inpatient hospitalization of one or more (formerly three or more) employees caused by a work-related incident; (3) any employee amputation (inpatient or outpatient as a result of a work-related incident; and (4) any employee loss of an eye (inpatient or outpatient) from a work-related incident. Under the new regulations, an employer does not have to report an inpatient hospitalization that involves only observation or diagnostic testing. But an employer must report inpatient hospitalizations that involve care or treatment. OSHA defines an inpatient as a person who is “formerly admitted” to a hospital or clinic and stays at least one night. Under the new OSHA regulation, if a heart attack is a “work-related incident”, the employer must report it to OSHA. The regulation goes on to state that the OSHA Area Director will decide whether to investigate the incident. Because of the Workers Compensation implications of designating a heart attack as work-related, the employer should, before contacting OSHA, discuss the incident with counsel or the insurer. Otherwise, the report may be considered an admission or evidence that the employer believed the heart attack was work related.

Reporting Deadlines

OSHA sets time limits for whether an event is reportable. Any death that occurs within 30 days of a work-related incident must be reported to OSHA. The duty to report an inpatient hospitalization, amputation, or loss of an eye is limited to occurrences within 24 hours of the work-related incident. If the fatality occurs more than 30 days after the work-related incident, or the inpatient hospitalization, amputation, or loss of an eye occurs more than 24 hours after the work-related incident, the employer does not have to report the event to OSHA. However, the employer must record the event on its OSHA injury and illness forms.

These regulations also set time limits within which a covered employer must report a covered event. A covered fatality must be reported within eight hours of the employer’s learning of the fatality. In regard to an inpatient hospitalization of one or more employees, an amputation, or a loss of an eye, employers are required to report to OSHA within 24 hours of learning of these events. If an employer does not learn about a reportable fatality, inpatient hospitalization, amputation, or loss of an eye at the time of the incident, it must still report these events to OSHA within eight hours after knowledge of a reportable fatality and within 24 hours of notice of a reportable inpatient hospitalization, amputation or loss of an eye.

Reportable events: Who Must Report, How To Report, and What Must Be Reported

In addition to the new reporting requirements, OSHA has updated who must keep OSHA records and who is exempt. Because most contractors and subcontractors are subject to the existing OSHA record keeping requirements, this article will not address those changes. However, if you were previously exempt, you should review the new record keeping requirements to determine if you are no longer exempt, or you should contact counsel.

An employer has three options for reporting a reportable event: (1) by telephone to the OSHA area office nearest the site of the work-related incident; (2) by telephone to the 24-hour OSHA hotline (1-800-321-OSHA or 1-800-321-6742); or (3) electronically using the event reporting application found on the OSHA’s website. In the event the area office is closed, the employer must report the fatality, inpatient hospitalization, amputation, or loss of an eye electronically using the event reporting application found on the OSHA’s website. In the event the area office is closed, the employer must report the fatality, inpatient hospitalization, amputation, or loss of an eye.

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chow. Jokes were thrown, lightly. He shook hands, he looked them in the eye and wished them well knowing that half of them, some predictions said 70 percent, might never see home again.

9 Take Responsibility: After he talked with the airborne troops that night, Ike went back to his quarters where he penned a speech that he would give, should the invasion fail, putting full blame for the failure on himself. A speech, thankfully, he never had to give.

10 Smile...A Lot: In the 1950s when American fears of Russian communism were being fanned to a fever pitch, Ike used his big grin, sunny disposition and all his powers of persuasion to court Russia’s leader Nikita Khrushchev. For six years he had Khrushchev eating out of his hand, and not until late in his presidency, when our U-2 spy plane was shot down over Russia, did Khrushchev break off the relationship.

Contrary to the image most people have, Eisenhower in his youth was a bit of a wild man. On the West Point football team, Ike was, according to a colleague, “the first cadet on the field…and the very last to leave.” He was famous for his one armed chin-ups.

As a junior army officer during Prohibition he greatly enlarged his circle of friends with his ability to make bathtub gin. One of those admirers, a fellow officer (and home brewer as well) by the name of George Patton invited him along on his midnight rides in what was then a bandit plagued part of rural Maryland. Ike and Patton, after getting good and sloshed on their homemade hooch, would take off in Patton’s Pierce Arrow armed like vigilantes and drive slowly down these country roads trolling for would-be criminals to savage.

Saturday nights, his reputation as a wild man on the dance floor raised more than a few eyebrows. But no matter. Come Monday morning the young Captain Eisenhower was sober as a deacon and already two hours ahead of everybody else in his work.

Unlike a lot of wild and reckless types, Eisenhower showed great administrative ability and a subtle political sense. He knew who to court and who to flatter, how to solve problems that stumped lesser talents. He worked a thankless staff job for Douglas MacArthur in the Philippines for years as a favor to his superiors for the promise of greater command responsibilities down the road. Those opportunities opened up in WWII when Ike was picked to be the military leader of the Supreme Allied Command.

After the war the Democrats and Republicans both courted Ike to become their candidate for president in the 1952 elections. It is testimony to Ike’s ability to keep his cards close to his vest that neither party knew what his affiliation was until the day he did declare. Ike struggled with the far right wing of the Republican party, but his popularity with the people was such that the John Birchers and the anti-communist fringe never crossed him.

Upon assuming office, Ike took one look at the military stalemate in Korea and pulled the plug. When Britain and France asked the United States to join them in invading Egypt, Ike wisely told them to forget it. (That ill-advised military adventure ended in disaster for our former allies.)

In addition to being a military hero who left us with a clear warning about the military industrial complex, Eisenhower also set in motion the Interstate highway program, which paved the way for two decades of economic progress.

After the election of 1960, Kennedy’s glamor overshadowed Eisenhower’s legacy. The torch had been past, but the generation that received it has yet to live up the accomplishments of the old guard. We are only in just the past few years beginning to appreciate how rare and significant Eisenhower was. Jean Smith’s book is a major contribution to history and leadership studies and should be read by everyone who aspires to be a future leader or better leader. ~

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OSHA
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an eye, using either an 800 number or the reporting application.

All employers subject to OSHA must report a covered fatality, inpatient hospitalization, amputation, or loss of an eye even if the employer is exempt from maintaining OSHA injury and illness records and logs.

In regard to motor vehicle accidents, if one should occur in a construction work zone, it constitutes a covered event that the employer must report to OSHA. If the motor vehicle accident occurs on a public street, highway, or outside a construction work zone, an employer is not required to report the event to OSHA. However, even though the employer does not have to report this incident, it must record it on its OSHA injury or illness records, provided that the employer is required to keep these records. (Construction industry employers are generally required to keep these records.

However, employers with 10 or fewer employees during a calendar year are not required to keep OSHA injury and illness records unless OSHA or the Bureau of Labor Statistics informs the employer in writing that it must keep these records.) Likewise, if the covered incident occurred on a commercial or public transportation system (train, subway, bus, airplane, etc.), the employer is not required to report the incident. But, as noted above, the employer must records the event on its OSHA injury or illness records and log (provided that the employer is required to maintain these records).

Because of the new regulations, employers should expect new hires at OSHA and should anticipate an inspection whenever there is a reportable worksite injury or hospitalization. Failure to timely report will subject the employer to a citation. Be prepared. Develop an updated OSHA reporting and inspection-response protocol. ~

NEW HANDS-FREE ELECTRONIC DEVICE LAW

(Home Bill 1360) WILL BE IN EFFECT JULY 1, 2015.

BE A SAFE DRIVER, BE A FOCUSED DRIVER

What does this mean?

- No use of hand-held electronic devices capable of providing voice or data communication while driving or temporarily halted in traffic for a stop sign or traffic signal or other momentary delays
- This includes cell phones, GPS, tablets, iPods, iPads or other devices that require data entry
- Emergency calls to 911 or other public safety agencies will be allowed
- Bluetooth or other hands-free electronic devices will be allowed
- One hand non-cellular 2-way radio use will be allowed
- Teen drivers under the age of 18 will not be allowed to use any electronic devices (hand-held or not) except to report an emergency. Anyone violating this will be subject to penalties and license suspension or revocation.

Penalties for Violations

- 1st Offense
- 2nd Offense
- 3rd Offense within 2 years
- $100 fine
- $250 fine
- $500 fine

Penalty assessments will be added to the fines

Why is the NH Law Important?

- During the past 4 years, 116 fatal crashes in New Hampshire were caused by distraction
- The increasing use of electronic devices is fast becoming the primary distraction
- While texting, a driver is 23 times more likely to crash

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Highway Contractor:
Some old concrete pavement technologies are making a comeback and giving asphalt a run for its money
by Kelly Clines
Equipment World Magazine, January 2015, Vol. 27, No. 1

Concrete overlays
With little new construction going on because of the lack of a long-term highway funding bill, pavement preservation has become a priority for most agencies and municipalities. This is an area where concrete overlays are showing great promise.

Photo inset: The technologies behind the concrete pavements used on our nation’s roads and highways have been around for a while, but new developments in equipment and admixtures have opened up the market for some of them, making them the latest trends in concrete paving. These trends include concrete overlays, roller compacted concrete and full-depth reclamation.

“Concrete overlays have been around for a while, but within the last seven to eight years in particular, we’ve seen a tremendous growth in the use of the technology,” says Bill Davenport, vice-president of communications at the American Concrete Paving Association (ACPA). “The downturn in the economy has played a part in that. Agencies are required to do more with less. They don’t have the money to do everything they’d like to do or everything they need to do, so that’s where the concrete pavement overlay comes into play.”

There are several types of concrete overlays that fall into two categories, bonded or unbonded. Within these categories, overlays are placed over distressed asphalt, concrete or composite pavements. One of the most common applications is bonded concrete over asphalt. In these applications, generally, the top 2 to 5 inches of the asphalt wearing course is milled off and replaced with concrete. The thin concrete overlay goes down quickly in comparison to complete road replacement, which allows the road to be opened to traffic much quicker.

“As an industry, we’re trying to educate agencies and contractors about the benefits of concrete overlays, as well as make them aware of potential applications,” Davenport says. ACPA is working through its staff engineers, affiliated associations and the National Concrete Pavement Technology Center to provide information and technical assistance but Davenport says there’s still work to be done. One example: the questions raised during a recent ACPA concrete overlay webinar. “They underscored the point that we still need to get the information out there on how to take advantage of concrete overlay technology, where the overlays can be used and the keys to building them right,” he says.

Stringless technology can play a big part in concrete overlays, making them easier to construct. A paver can use computerized electronic guidance systems and laser technology to control overlay thickness and smoothness and make adjustments as it moves along. “Stringless technology is taking hold with many contractors, as it makes the work site safer and helps improve final smoothness results when applied correctly,” Davenport says. “As we move forward, it is going to increase production and reduce some of the inconvenience to motorists.”

Roller Compacted Concrete
Although not a new technology, roller compacted concrete (RCC) is still new to many people. It started out as a specialty product placed by specialty contractors, but there has been growing interest in its use in different applications, including turning lanes, low-volume streets and roads, parking lots, and also in limited highway applications such as on shoulders.

“Roller compacted concrete is an interesting paving material,” says Wayne Adaska, P.E., director of pavements at the Portland Cement Association (PCA). “It competes well with asphalt paving on cost and speed of construction. The zero-slump
concrete, which uses no forms or reinforcement, is placed with asphalt-type pavers and then compacted to a high density using vibratory rollers.”

The key to RCC’s speed of construction is that it is placed in much thicker layers than asphalt. Where asphalt is placed in multiple layers of 3/4 to 2 inches, RCC is placed in single, thicker layers of up to 9 inches. Within the past five years, RCC has been embraced by many paving contractors who are getting involved because of the potential for the technology to replace asphalt, which has experienced sharp increases in cost.

One of the challenges RCC has faced is that the surface looks more like asphalt than concrete. It has an open texture, so those expecting the look of conventional concrete may be disappointed. “RCC is getting much better appearance wise,” Adaska says. “The top size aggregate has been reduced from 3/4 inch to as small as 1/2 inch, which results in a tighter surface texture; however, it’s still not at the stage where it looks like conventional concrete.”

To address the surface appearance, there’s an admixture available that shows great promise. The admixture is sprayed on the surface of the compacted RCC and then power troweled, resulting in a smoother, tighter surface. Last summer, the admixture was used on a project in the Chicago area. So far, Adaska says, the results have been outstanding, but it’s important to see how it holds up through the winter. Adaska believes admixtures, in general, will play a greater role in RCC in the future.

For several years, the ACPA has been leading the charge on improving the workmanship and quality of RCC. In early 2011, the association formed a task force made up of experts who have been providing guidance in advancing RCC, both technically and in market development.

**Full depth reclamation**

With preservation and rehabilitation on the minds of public agencies these days, there has been a renewed interest in full depth reclamation (FDR). Although not part of the concrete pavement family, FDR is one of the most sustainable paving products in the market place, since it preserves everything in place. This 30-year-old technology has been revolutionized in today’s market by larger, more powerful equipment. Reclaimers, or pulver mixers, have been the key component in revitalizing the market by expediting construction and making FDR economical.

FDR used to be a time-consuming job. Reclaimers had to make multiple passes to break up the old road, and special equipment such as rippers and breakers were required to make the material usable. Today, reclaimers can pulverize the asphalt and granular base in just one pass, going as deep as 18 inches. Cement is then spread, and the material is remixed, water added, if necessary, compacted, and cured. The result is a strong durable base that is constructed quicker and more economically, and is much more sustainable than removing and replacing the existing road. The base is suitable for concrete or asphalt pavement surfaces.

**Maintenance of traffic**

An emerging focal point for the concrete pavement industry is maintenance of traffic in construction work zones. “Agencies are under tremendous pressure to start and complete projects quickly, so, increasingly, contractors are required to keep traffic moving around work zones and avoid disrupting and delaying road users to the greatest extent possible,” Davenport says. “This is an area where the national association, along with local chapters, state paving associations and contractors will work together with agencies to find additional solutions.”

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www.equipmentworld.com

NHDOT Plow Rally on May 14th, 2015
Continued from page 9

- Sending or receiving a text distracts the driver for almost 5 seconds
- At 50 miles per hour, we travel longer than the length of a football field during that 5 seconds
- Even dialing a phone number increases the risk of crashing by 3 times

HANDS ON THE WHEEL, EYES ON THE ROAD

For more information on the Hands Free Law go to www.nhdtz.com/resources

Cat dealer Cashman Equipment installing camera-based system that monitors an operator’s fatigue

By Equipment World Staff
Equipment World Magazine, January 2015, Vol. 27, No. 1

Las Vegas-based Caterpillar dealer Cashman Equipment has now made available a fatigue monitoring system for heavy equipment operators. Initially rolled out on Caterpillar mining trucks in 2013, the Seeing Machines Driver Safety System is currently installed on 4,000 mining trucks worldwide, and working on 20 mine sites in the United States. Designed to work with mining trucks because the problem of driver fatigue is so prevalent, DSS is currently available as an aftermarket product on Cashman’s equipment.

The system works by measuring operator eye and eyelid behavior for fatigue symptoms, and issues alerts in the event of a “micro-sleep,” which is a period of light sleep typically lasting up to 30 seconds. “With this system in place, we have seen an average 80 percent reduction in fatigue and distraction events,” says Russ Armbrust, vice president for business development, Seeing Machines Limited. The system is camera-based, and therefore does not require the driver to wear any special equipment, which could be either uncomfortable or distracting.

Cashman’s general manager for equipment solutions, David R. Griffin, says the dealership has received positive feedback on their customers who are using DSS. Although Griffin did not share the cost of the system, he says comparing the total cost of machine ownership with the value DSS brings to the site makes purchasing the system a smart decision. “Upfront purchase price, installation cost and on-going monitoring costs are relatively insignificant and easily justified,” Griffin says.

Although the alliance with Caterpillar was to integrate Seeing Machines technology into Cat MineStar System mine management functions, Griffin notes the technology promotes safety across equipment types and in a range of applications. “DSS can be installed on any heavy equipment where there is a desire to continuously monitor and manage operator fatigue and distraction,” he says. “And, DSS can be installed on mobile equipment in non-production mining applications such as water trucks, light vehicles used in the sector and more.” -

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Staying Safe on the Highway:

- Buckle up, slow down, don’t drive impaired.
- Be well rested and alert.
- Use caution in work zones.
- Give your full attention to the road. Avoid distractions such as cell phones.
- Observe speed limits – driving too fast or too slow can increase your chance of being in a collision.
- Make frequent stops. During long trips, rotate drivers. If you're too tired to drive, stop and get some rest.
- Be respectful of other motorists and follow the rules of the road.
- Don’t follow another vehicle too closely.
- If you plan on drinking, designate a driver who won’t drink.
- Clean your headlights, taillights, signal lights and windows to help you see, especially at night.
- Turn your headlights on as dusk approaches, or if you are using your windshield wipers due to inclement weather.
- Don’t overdrive your headlights.
- If you have car trouble, pull off the road as far as possible.

www.redcross.org/prepare/disaster/highway-safety

Sharing the Road with Bikers

Motorists can help to make the roads safer for motorcyclists by taking some simple precautions:

- Be extra cautious on weekends, when more motorcyclists take to the road.
- Provide motorcyclists adequate room to maneuver. Follow at least three to four seconds behind them.
- Allow extra maneuvering room in areas with potholes, pavement transitions and railroad crossings. Motorcyclists may need to slow down, stop or adjust their lane position.
- Never try to share a lane with a motorcycle. Motorcycles have the same right to lanes as any other vehicle.
- If a motorcycle is nearby, check your mirrors carefully before changing lanes. Motorcycles may be in your blind spots or difficult to see because of their smaller sizes.

source -exchange.aaa.com/safety/motorcycle-safety/
Other Events

<table>
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<th>Event</th>
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<tr>
<td>5/21/2015</td>
<td>Mountain of Demos, Sunapee, NH</td>
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<tr>
<td>6/10/2015</td>
<td>Emergency Preparedness Conference, TBA</td>
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<tr>
<td>9/16/2015</td>
<td>11th Annual Ken Ward Memorial Plow Rally, TBA</td>
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Employment Opportunities

Please see the NH Municipal Association’s website for recent postings for employment opportunities in municipalities across the state.

http://www.nhmunicipal.org/Resources/ClassifiedAds/Employment

Visit the UNH T² website today!

www.t2.unh.edu

• Access to the most up-to-date calendar
• Register for workshops online
• Access to NH Road Salt Database
• See important announcements
• Access to the UNH T² Facebook page

New Hampshire Public Works Mutual Aid

With the recent power outages and associated damage, as well as impending winter storms, the need for mutual aid is ever increasing. In times of crisis, a mutual aid agreement allows neighboring communities to provide assistance in the form of labor and equipment to help each other through the disaster. Mutual aid is a FEMA-approved contract and will make the assisting municipality eligible for federal reimbursement.

Mutual Aid is available for only $25 per year and the benefits are innumerable. For more information, visit the T² website at www.t2.unh.edu/ma or contact Amy Begnoche at 603-862-1362.

Minimum Retroreflectivity Compliance Kit

The Technology Transfer Center is now offering one Avery Dennison Minimum Retroreflectivity Compliance Kit on loan for New Hampshire Public Works Departments.

There is no fee for the equipment loan, and municipalities may keep the Retroreflectivity Compliance Kit for up to four weeks (additional time may be requested).

For more information

t2.unh.edu/retroreflectometer-loan-programs
t2.center@unh.edu
603-862-2826

NH LTAP is on Facebook & Twitter!

Want to stay informed of our activities? Want to connect with other professionals who attend our training? Want to look at pictures from our training classes and other events? Then “like” us on Facebook or “follow” us on Twitter to stay connected! We are posting information daily on our activities, new programs, training, local news, and services.

www.facebook.com/nhltap
www.twitter.com/nhltap

Visit the UNH T² website today!

www.t2.unh.edu
Word Search

Be the first to complete this word search and send it to T² any of the following ways to win a FREE T² workshop!

Fax: 603-862-0620
Email: stephanie.cottrell@unh.edu
Mail: Technology Transfer Center
33 Academic Way
Durham, NH 03824

Words can be circled either upward, downward, backward, or diagonally.
Good luck!
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<thead>
<tr>
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<th>Cost (Town/Private)</th>
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<td>Lines, Levels, &amp; Layouts</td>
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This issue was edited by: Stephanie Cottrell  
Training Coordinator  
UNH T²

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www.t2.unh.edu/training-calendar