The IOWA ASPHALT REPORT

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www.apai.net

Asphalt is Cool(er)

Warm-Mix Asphalt (WMA) is all the rage these days in the asphalt industry and for good reason, it works. WMA is traditional Hot-Mix Asphalt (HMA) produced at 50-100 degrees less than normal HMA production temperatures through the use of additives to the asphalt cement or through a plant modification that allows the asphalt cement to be "foamed" during production. These processes allow production of asphalt around 230°-270°F with lay-down temperatures in the 212°-240°F range.

Dr. Chris Williams of ISU and John Bellizzi, P.E. having a discussion during a WMA demonstration by Des Moines Asphalt.

"In three years we won't be talking about Warm-Mix Asphalt and Hot-Mix Asphalt, we'll just be talking about Asphalt."

The benefits of the WMA are extensive both economically and environmentally with the additional possible benefit of creating longer-lived pavements. Lower temperatures at production and during lay-down eliminate steam and asphalt fumes creating a better environment for asphalt workers and the traveling public. The energy savings at the asphalt plant appears to be in the range of 15% with an additional environmental benefit of decreasing the production of CO_2 significantly. Study has shown that the small current volatile organic compound (VOC) levels released through the plant stack (already well below EPA standards) are reduced by an additional 50-90% using WMA. Because the asphalt cement is not heated to higher temperatures, the WMA is not prematurely oxidized during production, thereby increasing fatigue resistance and improving resistance to oxidation longer into the pavement's life cycle.

Proponents of WMA point to the ability to achieve density easier on the grade with less compaction effort. With the advent of Percent Within Limits (PWL) specifications being implemented by the Iowa Department of Transportation, WMA appears to provide more consistent density results, which in PWL terms, mean more monetary incentives to the contractor. A final advantage lies in the increased use of Recycled Asphalt Product (RAP) in making WMA. Dr. Chris Williams of Iowa State University, had this to say,"Warm mix asphalt is an economical approach to increasing the use and amounts of recycled asphalt

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Tales from the Road

As the father of a strong-willed 2-year old, I've been trying to teach him how to share with other children (and hit a split-fingered fastball). The routine generally involves me asking for whatever toy he is currently in love with and him telling me "No!" I then ask him to share his toy with me again and he usually relents but stays close by in case I happen to not be paying enough attention to the most important item in the world. I then return the toy to him. We do this back and forth until a level of trust is achieved between us. The concept of sharing is established and a mutual trust is developed. In my previous job as a project manager and estimator in Cedar Rapids, IA for the LL Pelling Co., Inc., it was clear to me that the people who you were selling asphalt and managing their projects needed to feel that same level of trust. My father taught me that trust is established by repeatedly doing what you say you are going to do. As a project manager, I will do a good job managing your project, the plant will produce high quality asphalt, the crews will do an excellent job paving your project, and we will do our very best to bring your project in on budget. In turn, the customer or managing authority will pay on time

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(Tales from the Road – Continued from page 1)

and is reasonable regarding scheduling and expectations (we still can't make water run uphill). By completing this process again and again, a level of trust is established that benefits both the contractor and the owner. Both parties understand that one bad exchange in this game of sharing can break years of trust already established. Poor contractors are insensitive to the owners needs, or if an issue comes up, they fail to respond and address the problem. Some owners and contracting authorities are slow to pay for services rendered or they treat contractors with suspicion even though they have been proven trustworthy. This ends up costing owners / agencies more money for the "pain-in-the-butt" factor of doing business. Great contractors and owners understand that a high level of trust will save them time, money, and hassles in the long run. The great contractors of the APAI work hard to earn the trust of owners and contracting agencies because they want their projects to be successful and profitable. They are members of their communities, churches, and schools; they have made a long-term investments in people and equipment. By joining the APAI, these contractors are aligning themselves with other contractors who value producing high-quality asphalt and doing excellent paving work. Just as I am establishing this level of trust with my son, I look forward to building that same level of trust with you as the EVP of the Asphalt Paving Association of Iowa. Please call me at 515-233-0015 or e-mail me at billr@apai.net, if I can be of service.

Smoother is Better,

Bill Rosener

(CARBON FOOTPRINT - continued from page 1)

pavement while increasing the industry's environmental stewardship. The reduction of plant production temperatures creates the opportunity for an increase in recycled asphalt pavement as well as other opportunities such as lower compaction temperatures and longer haul distances." Greater usage of RAP is both an environmental and economical advantage to the asphalt consumer.

The main hurdle standing in the way of complete adoption of WMA is the lack of projects nationwide being down for more than four years. The State of Texas placed over 400,000 tons of WMA in 2008 and has increased tonnage for 2009. The National Center for Asphalt Technology (NCAT) has several sections of Warm-Mix asphalt planned in 2009 for their NCAT Pavement Test Track where pavements are subjected to 10 Million ESALs in two years using heavily loaded trucks. Scott Schram, the Iowa Dept. of Transportation Bituminous Engineer, had this to say regarding Iowa's implementation of WMA, "The Iowa DOT recognizes the rapid emergence of Warm Mix Asphalt as a viable alternative to HMA. The environmental and economic benefits of this technology have accelerated the implementation process. WMA demonstration projects are planned for the 2009 construction season to create an opportunity for both the industry and DOT to gain field knowledge. We are committed to working with the industry and academic research to determine how to best utilize this technology while maintaining quality and performance."

Members of Polk Co. and the IDOT watching the placement of WMA by Des Moines Asphalt.

The IDOT and APAI are hosting three projects across the State of Iowa as test subjects for WMA demonstrations and open houses. They are: STP-065-3(57)—2C-91 (District 1/Warren County) - Foam NHSX-218-9(129)--3H-34 (District 2/Floyd County) - Revix STP-143-1(4)--2C-18 (District 3/ Cherokee County) – Sasobit. The IDOT is also encouraging counties that are interested in WMA to contact their contractors on Farm-to-Market projects to see if they are willing to use WMA for their project.

Several APAI contractors are using WMA for county projects already. In 2008, Des Moines Asphalt and Paving, a division of Oldcastle Materials Group, placed a mile-long section of Warm-Mix

and Hot-Mix side-by-side for Polk Co., Iowa, and has completed two additional WMA projects for Polk Co. this year, including one project utilizing 20% RAP and 5% recycled asphalt shingle (RAS). Mr. Jeff Chapman, Project Manager and Estimator for Des Moines Asphalt, had this to say about the projects, "The placement and workability of the Warm-Mix was the same as working with traditional Hot-Mix, but the crews found the environment to be better and the asphalt seems to actually be blacker on the WMA side of the 2008 project." The project in 2008 utilized the Revix© asphalt cement additive and the 2009 projects used a plant modification to "foam" the asphalt cement. The promise of Warm-Mix is very exciting to an asphalt industry that is already a leader in being the most environmentally-friendly-pavement.

The use of RAP, recycled asphalt shingles (RAS) and now WMA will cement asphalt as the GREEN pavement. As one National Asphalt Paving Association (NAPA) official stated at the annual convention, "In three years we won't be talking about Warm-Mix Asphalt and Hot-Mix Asphalt, we'll just be talking about Asphalt." Take advantage of the opportunity this summer to visit a WMA demonstration in your area and see that asphalt really is cool(er).

APAI Hall of Famer Jerry Petermeier Retires

Former Benton Co engineer and current APAI Field Engineer, Jerry Petermeier has announced his retirement effective at the end of July. Jerry attended ISU graduating with a BS degree in Civil Engineering in 1962. He was the Asst Co Eng in Marshall Co. from 1962-1967 and Lucas Co. Eng from 1967-1969. He became the Benton Co. Eng in 1969 and served until his retirement in 2001. While at Benton County he was known as somewhat of a "maverick" by not blindly accepting, but questioning rules, suggestions and specifications provided by the IDOT. Under his leadership and direction, Benton County placed more than 600,000 tons of HMA on their 170 miles of asphalt roads.

Jerry always believed in trying to provide the taxpayers with the best possible infrastructure, which he believed could only be obtained by using quality Hot Mix Asphalt. For his work in county engineering, Jerry was awarded the "Outstanding Achievement Award" in 1992.

Jerry has been a field engineer for the APAI since 2002. His in depth experience in the field of Hot Mix Asphalt has made him known among his peers as a "go to" person for answers to problems and questions. He has been a tremendous resource to counties, contractors and the asphalt industry during his work for the association. Jerry has an uncanny knack for being able to remember a project anywhere in the state and how the project went, successful or not. He was inducted into the Iowa Asphalt Hall of Fame in 2008.

Jerry will be spending time with his wife of 20 years, Ruthann, his six grandchildren and his cabin outside of Vinton. His knowledge and warm smile will be missed by the members of the APAI. Please send Jerry an E-mail at gdandrpetermeier@msn.com and wish him the best for his retirement.

LL Pelling Tests Intelligent Compaction Roller

The LL Pelling Co. tested an intelligent compaction roller the week of August 31st on a night-paving job on Highway 218 south of I-80. The roller was supplied by Sakai, Inc. in conjunction with an Intelligent Compaction (IC) study being conducted by Dr. David White of Iowa State University. The roller was specially outfitted with a GPS unit and display screen that mapped out the roller coverage on the mat. The mapping system color codes the roadway as the roller operator makes his passes over the mat and logs the readings into a data base that can be used later if issues arise. The roller also was able to give a "stiffness" reading that researchers hope will one day correlate into an immediate density reading for the roller operator. "The ability to correlate roller stiffness readings to density may be a ways off," said Chuck Finnegan, President of the LL Pelling Co., Inc, "but the GPS mapping system has a great value in giving the roller operator immediate feedback on his coverage of the mat. That knowledge will improve the consistency of our densities and improve the quality of our finished mat."

Redefining Asphalt

Let's face facts, asphalt is not the cheapest pavement anymore, but it is still the best pavement. Over the years, the asphalt industry has sold Hot-Mix Asphalt (HMA) as the low cost and high return pavement, while our competitors in the Portland Cement Concrete (PCC) industry were touting themselves as the more expensive and longer life pavement. The spike in crude oil prices last year led to record costs for asphalt cement (5% of asphalt by weight) and while asphalt cement pricing has gone down 50% from record highs, the days of being 10-25% less than our competitors are gone. It's time to redefine our pavement. Fortunately, the framework is there in our inherent advantages over PCC.

1. Asphalt is faster to construct.
2. Asphalt is smoother.
3. Asphalt is a perpetual pavement.
4. Asphalt is the environmentally friendly pavement.

Let's build our message on these advantages and pricing will be given second consideration by decision-makers.

Asphalt is faster to construct. HMA allows contracting agencies to make wholesale improvements to roadways while keeping traffic flowing or, in the case of night paving, not impacting the traveling public at all. Today's driver wants smooth, safe roads with no inconvenience to their daily commute. HMA provides this benefit by opening roadways immediately after the construction is completed. No cure time is needed. In addition, the speed of asphalt paving operations allows contractors to pave miles of roadway in a single day or night. Shorter duration of lane closures, or the use of nighttime paving, means fewer accidents, fewer delays (read money) and safer traveling for Iowa's motorists.

The Obama Administration has indicated it will be addressing Global Warming and the production of CO_2 by all industry.

Asphalt is smoother. The traveling public wants smooth roads. A study by the Federal Highway Administration (FHWA) and the National Cooperative Highway Research Program (NCHRP) in 2000 at the WesTrack facility discovered that a 10% decrease in the International Roughness Index (IRI) value of a pavement led to a 4.5% reduction in fuel consumption. The data also showed a significant reduction in fatigue failures of truck components.[1] "Driving on rough roads costs the average American motorist approximately $400.00 a year in extra vehicle operating costs."[2] Because asphalt is a flexible pavement, it can be paved in a continuous ribbon eliminating bumps and the need for saw joints. Asphalt can provide the traveling public with smoother, safer roads and save them dollars at the gas pump and the mechanic's shop.

Asphalt is the perpetual pavement. The asphalt industry has done an excellent job of making our product better over the past twenty years through the use of higher quality aggregates, more stone-on-stone contact in mixes, and specific Performance Grading (PG) of asphalt cements to address climate change and traffic designs. Perpetual pavements are asphalt road designs featuring thick base courses with a 2-3 inch wearing course that is milled off and replaced every 18-20 years. The underlying base courses are left untouched and the milled- off surface is recycled into a new wearing course. Perpetual Asphalt pavements exist on Iowa's main thoroughfare, I-80, in Iowa and Cedar Counties. These pavements were placed in 1962 and 1964 respectively and have lasted to date with only two overlays. The rest of I-80 has been completely replaced. The perpetual

pavement design allows a HMA pavement to last indefinitely through periodic rehabilitation but without the need for costly total reconstruction.

Asphalt is the environmentally-friendly pavement. Asphalt is 100% recyclable. It is America's number one recycled product at over 80 million tons per year. The sustainability of HMA means less new asphalt cement is required and fewer new aggregates need to be mined or quarried.

The Obama Administration has indicated it will be addressing Global Warming and the production of CO_2 by all industries. The asphalt industry has a tremendous advantage environmentally over other pavements.[3] The use of Warm-Mix Asphalt (WMA) is gaining momentum in the industry and brings with it decreased energy usage (approximately 15%), fewer emissions and no fumes. The use of porous asphalt in urban settings allows for the collection of storm water thereby recharging ground water levels. Collectively, these advantages make asphalt the environmentally responsible choice.

The asphalt industry has always had the best product. Asphalt is a faster, smoother, more durable and more environmentally- friendly pavement than our competitors. It's time to redefine our message to the decision-makers, asphalt is not the cheapest pavement anymore, but it is still the best pavement.

1. FHWA Studies Effects of Pavement Roughness at WesTrack, *Transporter*, June 2000.

2. Better Roads, June 2009

3. US EPA, Inventory of US Greenhouse Gas Emission and Sinks 1990-2005. www.epa.gov/climatechange/emissions/usinventoryreport.html

Senator Tom Harkin and the APAI delegation in Washington, D.C. Pictured (left to right) Corky Bailey, Jebro ; Todd Scott, Shamrock Const.; Gary Johnson, Henningsen Const.; Sen. Tom Harkin; Brad Henningsen, Henningsen Const.; Dr. Chris Williams, Iowa State University; Bill Rosener, Asphalt Paving Assoc of Iowa; Rich White, Iowa Limestone Producers Assoc.

APAI Lands at TCC Fly-In

Six members of APAI and Rich White, Director of the Iowa Limestone Producers Association spent time with the Iowa Congressional Delegation last week during the TCC Fly-In in Washington, D.C.

The call for increased highway funding was the theme and a new highway bill in 2009 was the goal. Chairman of the House Transportation and Infrastructure Committee, Jim Oberstar, told the group gathered that the House of Representatives would see the new bill in the third week of June. He also indicated that the current bill, SAFETY-LU, would run out of money sometime this summer.

All of the Iowa Congressmen met agreed upon the importance of increased infrastructure spending, but were not as sure of the funding mechanism. An increase of the federal gas tax by 18.5 cents was suggested to carry the funding for the new $450 Billion multi-year transportation bill. Most members felt the tax would be politically unpopular and that a stop-gap spending measure would carry the current bill into next year when the Senate would begin considering the new highway bill. A grass roots effort by APAI membership supporting an increase to the gas tax will be necessary in the future.

A special thank you to Rich White for lining up the appointments and to Gary Johnson, Brad Henningsen, Corky Bailey, Todd Scott and Chris Williams for attending this year's event.

All New APAI Website Online

Check out our newly revamped website at *www.apai.net*! New features, new information and new photos!

Iowa Asphalt Report is Going Digital

In an effort to be environmentally responsible and cut down on printing costs, this will be the final printed IAR. If you are not currently receiving the Fastlane from the APAI go to apai.net and sign up for our mailing list or email Minnie at apai@apai.net.

Upcoming Events

2009 APAI Annual Convention
December 2-3, 2009
West Des Moines Marriott
West Des Moines, IA

2009 County Engineers' Conference
December 8-11, 2009
Scheman Building
Iowa State University
Ames, IA

NAPA's 55th Annual Meeting 2010
January 13-21, 2010
Hilton Grand Wailea
Maui, HI

North Central Asphalt User / Producer Group (NCAUPG)
February 3-4, 2010
Sheraton Overland Park Hotel
at the Convention Center
Overland Park, KS

2010 Greater Iowa Asphalt Paving Conference
March 3-5, 2010
Des Moines Airport Holiday Inn
Des Moines, IA

APAI Welc

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Engineers & Surveyors, Inc.

Anderson-Bogert Engineers & Surveyors, Inc. provides civil engineering, traffic engineering, engineering planning, roadway and street design, water and wastewater development, and surveying services to public and private clients. The firm's staff of 23 is highly qualified in their respective areas of civil engineering and surveying with the engineering personnel averaging nearly 15 years of experience. A firm principal or senior staff member is directly involved in the design on all projects. Anderson-Bogert Engineers & Surveyors, Inc. is a service-oriented company where quality, budget, and punctual delivery are stressed.

WHITFIELD & EDDY P.L.C.

Whitfield & Eddy, PLC is a full-service law firm with four Iowa locations. Practice areas include banking, real estate, insurance defense, product liability, labor and employment, and a special emphasis in construction law. Their four locations are in Des Moines, West Des Moines, Ankeny and Mt. Pleasant.

Elite Flagging, Inc.

Elite Flagging, Inc. was founded in the summer of 2005. Though a young company founders Carolina DeShaw and Jim Young come to the traffic control profession with 22 years of experience between them. Elite Flagging, Inc. has a mission to provide traffic control services to companies doing road construction in a safe and professional manner. Through courtesy and a professional attitude, Elite flaggers will project a positive and safe image to the public, which reflects toward our organization as well as the project as a whole.

Elite Flagging, Inc. realizes that traffic control is an important responsibility and should be carried out with authority and dignity. Each of their flaggers is provided with a training course in public relations, communications, and simulated traffic control safety procedures. In keeping with their belief in safety first, their employees are administered random drug tests. Elite Flagging, Inc. are proud members of APAI and also have full-time ATSSA Certified Flagging Instructors, Traffic Control Technicians, and Traffic Control Supervisors on staff.