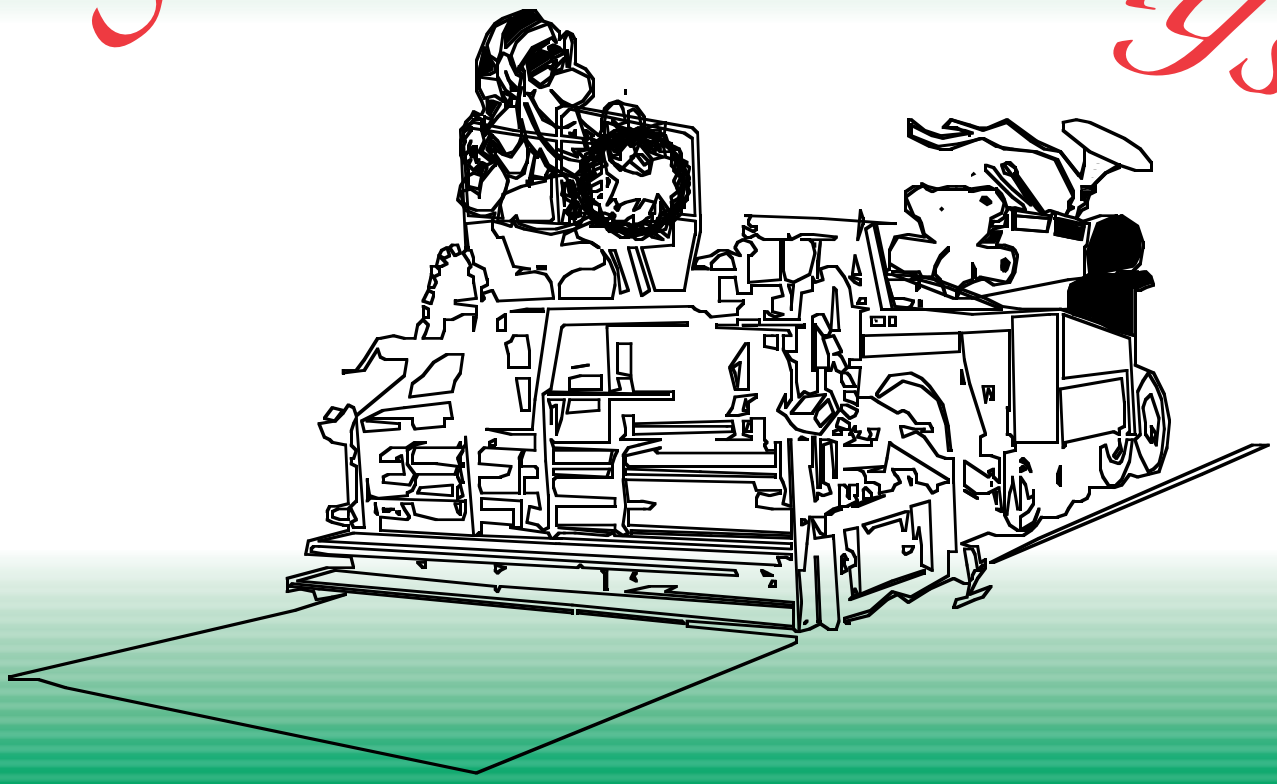
OHIO

HOT–MIX ASPHALT

VOL. 7 NO. 4 CURRENT NEWS December 15, 1998

Season's Greetings



IN THIS ISSUE:

THE OHIO CENTER FOR ASPHALT PAVEMENT EDUCATION MAKES ITS DEBUT

Education is the key to the future

This fall marked a major threshold for FPI's education and training efforts. Through the guidance of the Education Committee, the Ohio Center for Asphalt Pavement Education (OCAPE) has been created to be the focal point for hot mix asphalt (HMA) training in Ohio.

Last year, FPI held 14 schools which were attended by 437 people, in addition to co-sponsoring the Ohio Asphalt Paving Conference with ODOT which was attended by over 200 people. "Clearly FPI's training and educational efforts have reached the point where a more formal organization and approach needs to

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November 30 - December 5	Operating Engineers Union Paver School - Miamisburg
January 12	Asphalt Pavement Rehabilitation & Preventative Maintenance - Cincinnati
January 13-14	FPI Members Media Training - Columbus
January 19	Specifying Hot Mix Asphalt Pavements - Toledo (co-sponsored w/LTAP)
January 21	Specifying Hot Mix Asphalt Pavements - Cincinnati (co-sponsored w/LTAP)
January 26	Asphalt Pavement Rehabilitation & Preventative Maintenance - Cleveland
February 3	Ohio Asphalt Paving Conference - Columbus
February 7-11	NAPA Annual Convention - San Diego, CA
February 17	Asphalt Concrete Pavement Design School - Toledo (co-sponsored w/LTAP)
February 18	Preventative Maintenance for Managers - Columbus (co-sponsored w/LTAP)
February 23	Superpave Basics - Columbus
February 24	Asphalt Concrete Pavement Design School - Cincinnati (co-sponsored w/LTAP)
February 25	Asphalt Recycling - Columbus (co-sponsored w/LTAP)
March 1-5	Level II Mix Design - Columbus
March 1-5	Operating Engineers Union Paver School - Miamisburg
March 8-10*	NAPA Paving Superintendents' Training Program - Cincinnati
March 8-12	Operating Engineers Union Paver School - Miamisburg
March 10	Superpave Level I - Columbus
March 10-12*	NAPA Middle Management Training Program - Cincinnati
March 11-12	Superpave Level II - Columbus
March 16	Preventative Maintenance for Crew Members - Columbus (co-sponsored w/LTAP)
March 24	Paver Operation & Maintenance - Greater Columbus Convention Center
March 24	Traffic Zone Safety- Greater Columbus Convention Center
March 24	Parking Lot Construction - Greater Columbus Convention Center
March 24	Asphalt Plant Operation - Greater Columbus Convention Center
March 31	Preventative Maintenance for Managers - Fairborn (co-sponsored w/LTAP)
April 7	Preventative Maintenance for Crew Members - Hudson (co-sponsored w/LTAP)

* Sponsored by the National Asphalt Pavement Association.

be in place to administer them" according to Don Weber, S.E. Johnson Companies, Inc., Chairman of FPI's Education Committee. Mr. Doug Anderson, Columbus Bituminous Concrete Corporation, Chairman of the FPI Board of Directors notes that "this makes a clear distinction between FPI's marketing and educational efforts".

The goal of OCAPE is twofold. First is to provide educational opportunities for FPI member companies. This includes personnel from top management to the roller operator. This year OCAPE is answering this challenge with an array of programs from a two-day media training workshop to schools on maintenance and operation of pavers and rollers. OCAPE will also be cooperating with other organizations to accomplish this goal. Don Weber sites the Local 18 Operating Engineers Union's week long school on paver operation which piloted last year. The Union established this school at the request of FPI and FPI member companies are providing state-of-the-art equipment and personnel to help with the training.

The second goal is to provide educational opportunities to specifiers and customers of the HMA industry. "A quality pavement starts with the person who buys it" says Doug Anderson. "He or she must specify the right mix type, binder grade and pavement buildup along with a proper foundation for placement. If any of these are not right, the job will not turn out as well as it could have regardless of the efforts put forth by the contractor." As such OCAPE is offering schools on specifying HMA pavements as well as asphalt concrete pavement design. OCAPE will also be cooperating with ODOT and the Local Transportation Assistance Program (LTAP) to provide HMA related training for state and local government employees as well as members of the engineering consultant community.

"We are really excited about OCAPE" says Fred Frecker, Executive Director of FPI. "It gives us the opportunity to take our training and education efforts to the next level." Frecker explains that plans are being discussed to establish an asphalt technician certification program which will incorporate required knowledge of the design, production and laydown aspects of HMA pavements. "We see this as comparable to what presently exists in the area of mix design with the Level I, II and Superpave certifications."

A summary of HMA related educational opportunities from OCAPE and others is listed at left.

OHIO TURNPIKE COMMISSION HONORS FPI MEMBERS FOR QUALITY ASPHALT PAVEMENT

Quality Pavement Awards Presented

FPI member companies Miller Brothers Construction, TolTest, Inc., and Mannik & Smith, Inc. were recipients of the Ohio Turnpike Commission's Quality Paving Award - Maintenance Project Category. The Award was given for their team effort in the mainline resurfacing of the Ohio Turnpike from milepost 71.1 to 80.8 in Wood, Ottawa and Sandusky Counties. Awards were presented at the Turnpike's Christmas Dinner Party on December 3rd. Alan Plain, Executive Director of the Ohio Turnpike Commission, is particularly pleased with the high quality work received on the Pike. This quality doesn't come by accident. In his words, "We've got the best roads because we demand quality!"

FPI extends its congratulations to Miller Brothers Construction, TolTest, Inc., and Mannik & Smith, Inc.

Jaan Mannik (Mannik & Smith), Alan Plain, Dennis Hines (Miller Bros.), Mike Boyle (TolTest), Bob Arlow, David Ransbury (Chief Engineer)

TEA-21 "FIREWALLS" CHALLENGED

Now You See It – Now You Don't

When it comes to the politicians in Washington, DC, you have to be constantly vigilant. Unlike building a highway, it seems that you can never walk away from Congress saying the job is finished.

Everyone worked very hard for the increased highway funding brought about by TEA-21, the new federal transportation bill. We thought the established "firewalls" would make sure Appropriation Committees of the House and Senate would follow through with funding established by TEA-21's passage. In fact, we all breathed a sigh of relief when the 1999 Appropriations Bill passed with highway funding matched to that called for by the "firewalls". What we didn't know was that, at the 11th hour, the chairman of the House Appropriation Committee, Congressman Bob Livingston (R-LA), slipped in language that would permit the committee to ignore the firewall provision in future appropriation acts.

Disbelieving transportation officials and advocates were furious and received assurances from the Speaker of the House, Newt Gingrich, that this would be corrected in the next appropriations bill and the firewalls would in fact be honored. Everything is again fine you say? Big problem! Newt Gingrich announces he is retiring as Speaker of the House and will not run for reelection to his congressional seat. Replacements for the Speaker's position start lining up and emerging from the pack to replace Congressman Gingrich as speaker is none other than -- you guessed it -- House Appropriations Committee Chairman Bob Livingston.

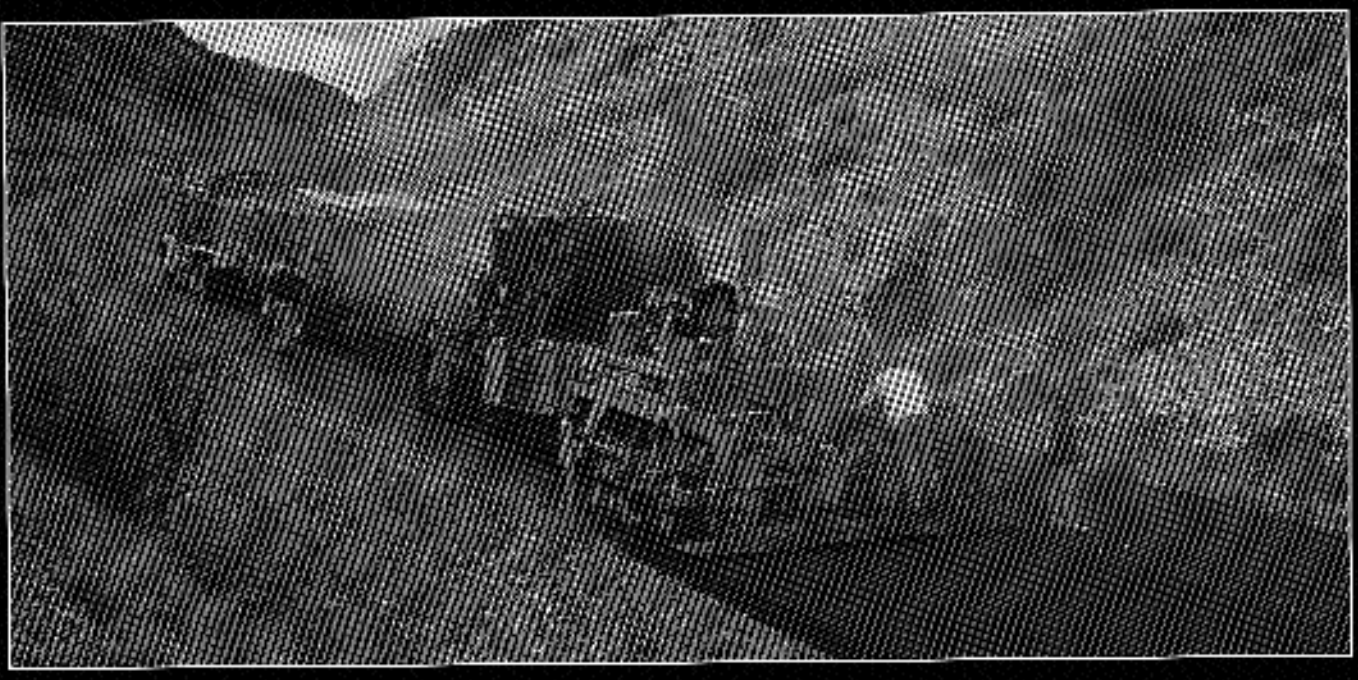
It is now pretty obvious that the appropriators will try to recapture the decision making authority they lost to TEA-21. What is not so obvious is the role the new Speaker will take in that fight. Don't beat your sword back into a plow just yet -- it looks like the war isn't over!

COLUMBUS EQUIPMENT COMPANY APPOINTS NEW COMPANY PRESIDENT

COLUMBUS, OHIO – Columbus Equipment Co. recently announced the appointment of its new company president, Bob Olejniczak. Olejniczak assumed the position of the presidency on June 20, 1998. A company veteran, Olejniczak replaced retiring president Gary Gleckler, who served as president of the company for ten years.

Olejniczak has been with Columbus Equipment Co. for twenty years, in the positions of Sales Coordinator, Sales Executive and Sales Manager. Before taking over his new position as President, Olejniczak served the company as Executive VP from July 1, 1996 to June 19, 1998.

Columbus Equipment Co. is headquartered at 65 E. Kingston Ave., in Columbus, Ohio, and has seven branches statewide. Columbus Equipment Co. is an integral part of the heavy construction equipment industry in Ohio, representing such industry giants as Komatsu, JCB, Grove, Blaw Knox, Moxy, Ingersoll Rand, as well as many other lines.



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HOW SMOOTH IS SMOOTH?

As we've noted in the first two parts of our series on smoothness, drivers want smooth roads. Yet it hasn't always been easy to measure smoothness objectively, especially in the early years with limited tools and knowledge. But over the last few decades mechanization and technology have provided increasingly precise tools. That's important for a number of reasons. With the new incentive/disincentive specifications, the contractor's terms of payment are based on the measured smoothness test results. The owner may pay a bonus for a pavement that's smoother than required, or impose a penalty for a ride that doesn't meet the specification. Clearly measurements must be accurate, repeatable, and hopefully related to what we feel when we drive the road.

Historically Speaking. Road smoothness measuring tools and measurement indices have been around since the turn of the century. One of the earliest methods, deviations on a straight edge, consisted of laying a straight edge on the pavement and measuring the gaps. Specifications called for a maximum allowable deviation from a straight line, typically 0.02 feet in the 12 foot straight edge. Even though this procedure is a reasonable measure of paving quality, it is possible to meet the specification with a road that "feels" rough when driven.

Progress to Profilographs. Deviations on a straight edge gave way to a rolling straight edge design, from which modern profilographs were developed. These devices have wheels at both ends, supporting a frame that acts as a straight edge. A measuring wheel is mounted on the frame. The wheel measures the road's longitudinal profile -- the bumps and dips in the pavement surface. The accumulated total of the measured deviations is expressed in an inches-per-mile rating. A rating of 5 to 7 inches per mile generally means a smooth riding pavement.

The profilograph has been used successfully for many years, however it is labor intensive, and measures at walking speeds.

Humming Buicks, the Mother of Invention. In the late 1950s, after discovering a problem with harmonic vibration in some models of Buicks, GM began to investigate the measurement of road roughness. Inertial profilometery was born. By using accelerometers to compensate for the motion of the vehicle body, these instruments directly measure road surface profile.

The Benefits of Inertial Profilometers. One of the most accurate and efficient tools available for measuring smoothness, profilometers can accurately obtain continuous measurements of the road profile at highway speeds. The first generation of profilometers was developed for network level pavement management work. However, new low-speed/light-weight versions have been developed to support the growing smoothness specification demand. The low-speed version can travel approximately 10 to 24 mph with highly repeatable measurement results. Another advantage of profilometers is that the data can be used to compute many different indices, including the PSI (Present Serviceability Index), the IRI (International Ride Index), and the profilographs inches per mile profile. This allows an easy transition from profilograph specifications to profilometers.

The profilometer is rapidly gaining respect as a cost-effective, accurate device. Recently the Federal Highway Administration has moved to recommend a change to profilometers to measure pavement smoothness.

Improving on Specifications. While measuring tools and indices have become more sophisticated, there is still much to know and learn about setting road smoothness specifications.

The current specifications were developed for high speed highway applications with "multiple opportunities" for the contractor to improve an existing rough ride.

Before we are able to apply these types of specifications more broadly, we need to understand the relationship between initial road roughness, "number of opportunities," and expected final smoothness. Some states have already begun to develop these data (see sidebar) and to reap the benefits of improved smoothness on a wide range of roadways.

Smooth Moving Forward. The next decades should bring us further in our quest to create smooth roads. Technical innovations, process improvements, compilations of historical data, human ingenuity – all will bring us closer to the ultimate in smooth roads.

SPECIFICATIONS BECOMING SCIENCE

In an ideal world we would like to be able to relate the effect of each construction activity (i.e. mill & fill, overlay, wearing course, etc.) to the final ride quality. If this were possible we could perform a "roughness design" in addition to the structural design that is currently the standard in reconstruction projects. Roughness designs are not yet in practice, but the Arizona Department of Transportation (ADOT), is bringing us closer.

ADOT believes in incorporating historical and current road smoothness data into specifications for reconstruction projects. "You need to know how much you can realistically improve the smoothness of a road before you set your specifications," says Larry Scofield, Research Engineer for ADOT.

ADOT considers the number of opportunities the contractor has to improve smoothness (i.e. one lift of overlay, two lifts of overlay, etc.) in the specification limits. This provides an equitable means of establishing smoothness specifications that consider both the existing condition of the road and the specific design.

THE SMOOTHEST!

Section 71.1 to 80.8 in Wood, Ottawa and Sandusky Counties was the smoothest pavement in 1997 for the Ohio Turnpike Commission's Maintenance Project Category. The contractor performing the work was Miller Brothers Construction, Archbold, Ohio.

The advent of incentive/disincentive specifications for smoothness has resulted in significant improvement in ride and construction quality on all of Ohio's major highways.

Member Spotlight

Herk Wolfe, Chairman of the Board, with David Wolfe, President of Wyandot Dolomite and its subsidiary Hancock Asphalt & Paving Company.

"It's plain and simple. without roads and without buildings, you don't have a civilization," according to David Wolfe, President of Wyandot Dolomite and its subsidiary, Hancock Asphalt and Paving Company. "Roads have always been part of civilization's growth. The Romans had roads, and they couldn't have done what they did without them." On a small scale, Wolfe's Carey, Ohio, company helps contribute to this "infrastructure that makes America so unique."

Hancock Asphalt is a small, yet very important part of Wyandot Dolomite, a stone quarry operation that was started in 1950 by several businessmen from Findlay, Ohio. For their first ten years in business, Wyandot couldn't provide aggregate for any highway construction jobs because their major stone competitor owned the only asphalt plant in the area. In 1960, Wyandot bought a small hot mix plant so they could "share in a little bit of that road business." A year later, they bought a one-ton Barber Greene asphalt plant and in 1962, purchased the Findlay-based Dale Krout & Son Company. Now with three asphalt plants, they were able to compete for the increasing construction business in northwest Ohio and incorporated Hancock Asphalt & Paving Company as a wholly-owned division of Wyandot.

In its early years, Hancock acquired an asphalt plant in the Akron area and did one of the first night paving jobs in the state on I-76, as well as paving a number of runways at the Canton airport. Hancock has since sold the Akron plant and concentrates on northwest Ohio. Most of their work consists of resurfacing two- and four-lane roads because "there isn't that much new construction in the area." David notes that District 1 does not receive the revenues that other ODOT Districts do, adding, "We don't get the dollars because our roads last longer, and we don't have the motor vehicle count that other counties have." Their only "real new construction project" has been the Upper Sandusky by-pass project in 1993. Currently Hancock's three asphalt plants service construction projects in four surrounding counties and three ODOT Districts and utilize two five-man crews. The plants can produce as much as 200,000 tons of asphalt a year and generate $5 to $7 million annual business.

Hancock's size has remained about the same since its inception. "We got into the asphalt business as a means of getting rid of stone," according to Harold "Herk" Wolfe, Chairman of the Board. "We haven't concentrated on it the way we should have mainly because our basic growth has been in the stone business." That doesn't mean the asphalt side of Wyandot is not important to the company. "It's been a very important part of us surviving through the years", says David. "there were some years when it absolutely carried us, especially during the recession of the early 1980's. Herk agrees, noting, "The asphalt plants give us diversification. You can get a better return if you do something with your base product than if you just

Continued on page 12

FPI IS NOW ON THE WEB

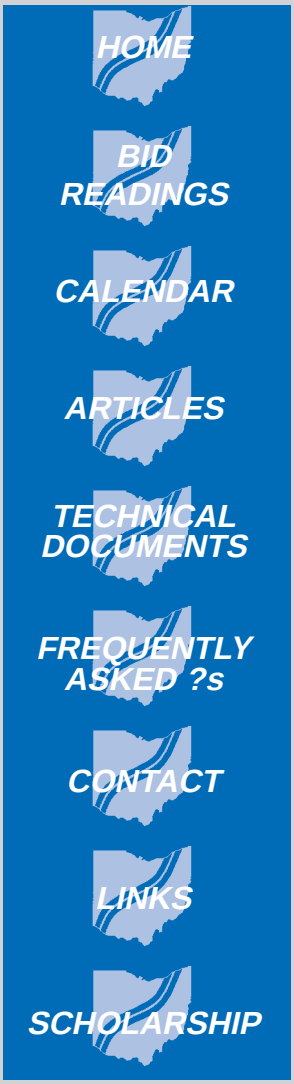
Watch Out Cyberspace Again!!

In our June 1997, newsletter we reported that FPI had "joined the 20th Century and has an e-mail address". Well, that century didn't last long, because we've now taken a step toward the 21st century with our own web site:

www.flexiblepavements.org

While the site will remain a "work in progress" indefinitely, we intend for it to become a convenient source of information regarding Ohio's asphalt paving industry with links to sources of the latest asphalt paving technology. Features will also include basic contact information, results of ODOT's bid openings, a calendar of events and seminars, technical articles and documents and frequently asked questions, FAQ's, (with answers).

Suggestions from customers and members as to features they would like to see on the web site will always be welcome. E-mail to FPI will be accessible from the web site, however, our direct e-mail address remains: flexpave@netwalk.com



FLEXIBLE PAVEMENTS INC.

Flexible Pavements, Inc. (FPI) is an association for the development, improvement and advancement of quality asphalt pavement construction.

As the trade association for the Hot Mix Asphalt Paving Industry in Ohio, FPI provides technical information and training for its members and customers on asphalt pavement design, production and construction.

Highlighted Links:

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NATIONAL SUPERPAVE RESEARCH CONTINUES TO FILL IN THE GAPS

The number of national research projects addressing Superpave issues continues to increase. Although the five-year research program that led to Superpave was quite extensive, there simply was not enough time or resources to answer all of the questions related to the implementation of a new system.

The National Cooperative Highway Research Program (NCHRP) is one of the main organizations sponsoring Superpave research. (FHWA is another.) NCHRP is a branch of the National Academy of Sciences (NAS) and is funded by contributions from all of the state departments of transportation. This sponsorship tends to lead to practically oriented, implementable research projects meeting recognized needs for information. Several Superpave-related projects are ongoing at NCHRP or are scheduled to start soon. Here is a very brief run down of the current projects.

NCHRP 9-7 *Field Procedures and Equipment to Implement SHRP Asphalt Specifications.* This study was recently completed by Brent Rauhut Engineering and some of the results were published as NCHRP Report 409, "Quality Control and Acceptance of Superpave-Designed Hot Mix Asphalt." This study was designed to establish comprehensive QC/QA procedures for the plant and laydown site. The Field Shear Tester (FST) was developed under this study to be used in conjunction with quality testing. The Superpave Gyratory is also an integral tool for QC/QA testing. The study also developed the framework for a training program to qualify technicians to do the QC/QA.

NCHRP 9-9 *Refinement of the Superpave Gyratory Compaction Procedure.* The objectives of this study are to recommend appropriate changes to the Superpave gyratory compaction procedure to further refine the procedure and to extend the use of the procedure (or modified procedures) to open-graded, gap-graded and large stone mixtures. The study is currently evaluating such things as the effect of short-term aging temperature on mix compaction, effect of mixture depth in the pavement on the required Ndesign requirement, simplification of the Ndesign table, need for Nmax and extension of the Ndesign table to low-volume and very high volume roadways. Auburn University (NCAT) is expected to complete this research soon.

NCHRP 9-10 *Superpave Protocols for Modified Asphalt Binders.* This study, being conducted by the Asphalt Institute and Dr. Hussein Bahia at the University of Wisconsin, is intended to provide detailed guidance on how to revise the Superpave binder tests and specifications to make them applicable to modified binders. The study will also identify problems with the Superpave mixture analysis tests when testing modified binders. The generalized approach being proposed under this study involves use of screening tests to categorize a binder as simple or complex; different testing procedures are then followed for the different binder types. Phase III of this project is currently underway with a planned completion date of September 1999.

NCHRP 9-12 *Incorporation of Reclaimed Asphalt Pavement in the Superpave System.* The objective of this study is to develop detailed guidelines for incorporating RAP in Superpave mixtures, including manuals for field and mix design laboratory technicians. The study is first investigating whether RAP is just a "black rock" or whether there is in fact some blending of the old, hardened RAP binder in the added virgin binder. Following this investigation, the study will go on to evaluate the effects of RAP on resulting binder and mixture properties and develop working guidelines for the use of RAP. The North Central Superpave Center and the Asphalt Institute are collaborating on the project which will be completed in 1999.

NCHRP 9-13 *Evaluation of Water Sensitivity Tests.* The test method used in Superpave to assess the resistance of an asphalt mixture to stripping (moisture sensitivity), AASHTO T283, was developed for 4-inch Marshall or Hveem samples. This study is intended to evaluate the applicability of the test and current criteria to 150mm gyratory samples. The University of Nevada at Reno is conducted the study, which is scheduled to conclude December 31, 1998.

NCHRP 9-14 *Investigation of the Restricted Zone in the Superpave Aggregate Gradation Specification.* This study will determine if the restricted zone requirement is necessary by evaluating the performance of hot mix asphalt; fine aggregate angularity and the volumetric mix criteria may be adequate to assure performance, at least at some traffic levels. This two-year study was initiated at NCAT May 1, 1998.

NCHRP 9-15 *Quality Characteristics and Test Methods for Use in Performance-Related Specifications of Hot Mix Asphalt Pavements.* A contract will soon be awarded for this three-year research project to identify construction-related and as-produced quality characteristics of HMA pavement that affect long-term performance, and select simple, practical, rapid tests to measure these quality characteristics in the field suitable for use in performance related specifications. It is envisioned that exiting test methods can be used to measure quality and new methods need not be developed. The study will also develop an experimental plan for field validation of the proposed test methods, criteria and threshold values.

Three additional projects are planned and are under development at the current time.

NCHRP 9-16 *Superpave Mix Design Mechanical Property Test*. Many agencies see a need for a mechanical strength test to be used at the conclusion of a volumetric mix design to provide some confirmation that the mix designed will have adequate resistance to permanent deformation. Several efforts are already underway to develop such a test, such as work sponsored by the FHWA and the Field Shear Test developed under NCHRP 9-7. This study is intended to determine if characteristics of the Superpave gyratory compaction curve can be related to permanent deformation in pavements. The study is tentatively scheduled and a request for proposals is expected soon.

NCHRP 9-17 *Accelerated Laboratory Rutting Tests: Asphalt Pavement Analyzer.* Many states, especially in the southeast, are working with the Asphalt Pavement Analyzer (APA), formerly called the Georgia Loaded Wheel Tester, to evaluate the rutting-resistance of asphalt paving mixtures. The objectives of this project will be to determine the suitability of the APA for predicting rutting and for use as a field QC/QA test, and to compare the effectiveness of the APA to other loaded wheel testers and a simple strength test. The request for proposals on this project was posted in mid-August.

NCHRP 9-18 *QC/QA Procedures for Superpave Mixes.* This study will follow-up on the results from NCHRP 9-7 and further evaluate the Field Shear Test (FST) device. Specifically, the study will evaluate how specific mix types and volumetric properties affect FST-measured shear properties, modify the prototype FST, if required, and develop a draft test method and guidelines in standard AASHTO format. More detailed information on all of these projects can be found at the NAS website (http://www2.nas.edu/trbcrp/nchrp5/).

Written by Rebecca S. McDaniel, Technical Director
North Central Superpave Center

WINKLEMAN AND KICHURCHAK RECEIVE AWARDS OF EXCELLENCE

FPI Members Receive Ohio Turnpike Award

The Ohio Turnpike Commission recently presented Executive Director's Awards of Excellence to Larry Winkleman, Regional VP for S.E. Johnson Companies, Inc., and Mike Kichurchak, Executive VP for Solar Testing Laboratory. The Award is given each year to a contractor, consultant, or testing firm that the Ohio Turnpike commission wishes to acknowledge for their commitment to providing the Pike with high quality work. The Award recognizes those persons who's attitude and commitment to excellence evidences itself in the work they perform. FPI wishes to add our congratulations to Larry and Mike for the quality commitment this award represents.

Bob Arlow,
Larry Winkleman (S.E. Johnson),
Alan Plain

G. Alan Plain (Executive Director),
Bob Arlow (Deputy Executive Director - Operations),
Mike Kichurchak (Solar Testing)

(Member Spotlight, continued from page 8

sell it as the base product."

Wyandot's stone operation, the "backbone of our business," has mushroomed over the years. "We now do in two and a half weeks what it used to take us a whole year to produce," said Herk, noting aggregate production is about 2.0 million tons a year. "The largest value of this quarry is the quality of stone we have and the fact that we're on three different railroads and can get our product to market." Last year Wyandot shipped about 1.5 million tons of aggregate via 15,000 railroad cars.

Shipping by rail has been instrumental in Wyandot's success and Herk promotes and envisions a future where there will be "tremendous partnering between truckers and railroads. We've got to get the trucks off the highways." Herk says, noting "we've got gridlock galore." Herk admits "it's a terrible thing for an asphalt guy to say that, but a 100-car train will replace 400 trucks. Highway construction would still go on, but with the projections on truck and motor vehicles, rail has to be utilized to the fullest extent."

Herk is currently prodding railroads to use hot mix asphalt as a base under railroad ballasts and ties. "Hot mix asphalt is the ideal product, but it's a tough sell because the huge (rail) companies have not been too inventive" in changing construction methods in the last 150 years. Because railroads cannot just shut down, Herk said the industry must develop machinery that will "raise the rail, put the asphalt under it, and lower the rail so it can be reopened in six hours." If they can do that, Herk sees an "exciting future for the asphalt business, for the stone business, and for the general public."

Future growth is important to the Wolfe's. "If you don't grow, you die," explains David. Among items on the company's "to do list" include upgrading the capacity of the asphalt plants as well as the quarry. In the last three years, Wyandot has made major capital investments expanding the quarry and hopes to have a dry screening plant that will remain open all year by next winter. Both the quarry and the asphalt plants currently shut down in the winter.

The Wolfe family became involved in Wyandot in 1953 when Harold "Curly" Wolfe was hired as General Manager to help the fledgling business. His astute managerial skills turned the company around, and he was elected President in 1973, a position he held until his death in 1977. Curly was succeeded by his son Harold "Herk" Wolfe, who joined the company in 1959. Herk served as President until 1991 and is now Chairman of the Board. David, the third generation of the family-owned business, is currently President, while his brother Tim serves as Vice President of Sales. Herk's son-in-law Richard Dunn does geologic and quality assurance work for the company. Hancock Asphalt is run by Phil Rogers, who was originally with Dale Krout & Son, and is now Vice President in charge of construction. Chad Johnson and Brad Manns are Paving Superintendents for Hancock. All Wyandot's 55 employees promote the company's philosophy of being honest, making a quality product, and going the extra mile for the customer.

Hancock Asphalt & Paving Company's mixing facility located in Carey, Ohio.

"Everyone is a salesman," says David.

The company supports community activities and is strongly associated with numerous trade organizations. Herk has served on the boards of

(Member Spotlight, continued on page 15

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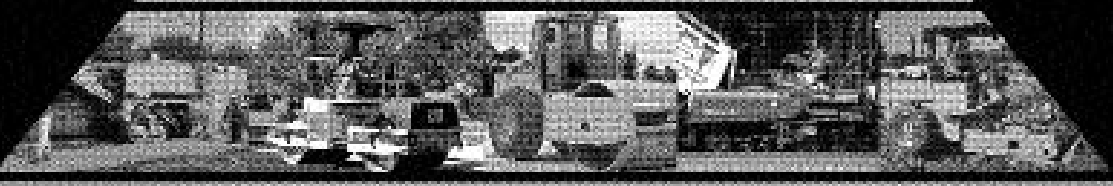

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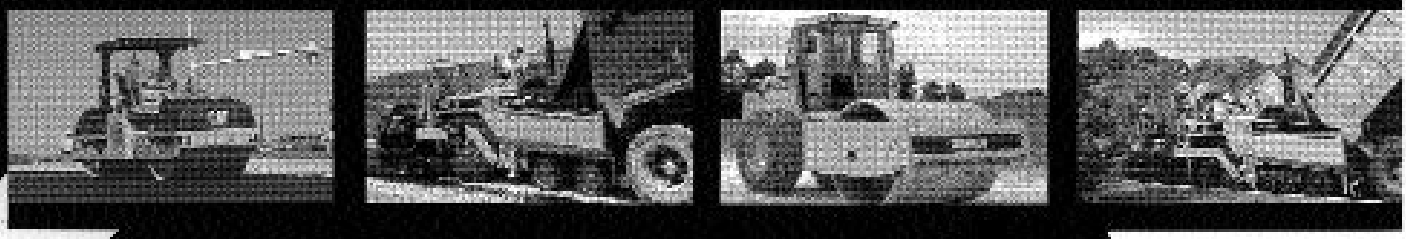

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IS YOUR ASPHALT OPERATION YEAR 2000 COMPLIANT?

YEAR 2000 Presents Problems for Computers

Unless you're a hermit, you should be aware of the potential problem the year 2000 presents to computers. Often called the "Y2K" problem, it relates to computer hardware and software being able to interpret the date 1/1/00 as January 1, 1900 or January 1, 2000. If you're like me, you blew it off thinking someone will come up with a solution before 2000 and it probably doesn't impact me anyway. Guess again! The Y2K problem is real and can put an asphalt producer out of business in a nanosecond.

The problem goes back to the early days of computers in the 1960's and 1970's where memory was limited and expensive. As such, only two digits were used to represent the year, i.e. "98" instead of 1998. When we reach "00" the computer may not know how to interpret it and one of three things is going to happen:

1. If the hardware and/or software is relatively new, it may be Y2K compliant and function normally.
2. Errors will show up in your computer functions such as billings, payroll, etc.
3. The system may shut down entirely.

The problem goes far beyond the hardware and includes software and what are called programmable logic controllers (PLC).

First lets talk about the hardware. As mentioned earlier, newer equipment, manufactured in the last 2 years or so, is probably Y2K compliant. A call to the manufacturer or visit to his web site should confirm this. If it is not, it may be able to be fixed by using what is called a "patch". Much of the older equipment is not capable of being made Y2K compliant. 286, 386, and some early 486 computers are at risk. And don't just think about your stand alone desktop PCs and portable computers. If your system is networked, make sure that both the server and the individual work stations are date compliant.

Software must also be checked. If you returned the registration card when you purchased your software, there is a good chance you will be contacted by the manufacturer concerning upgrades. If not, then you will have to take the initiative and contact the manufacturer about what you will need. Custom software that has been altered or specifically developed for your organization should be especially looked at.

The last area is the programmable logic controllers (PLC). These are the computer chips used in most everything today. This includes everything with an internal clock such as fax machines, VCRs, HVAC systems and security systems. In fact, anything with a timer, such as a coffee maker or equipment with an LCD readout, may have an internal clock.

Generally two methods are used to make existing applications year 2000 compliant. The first is called date expansion and involves reprogramming the year from a two digit to a four digit format. The second is called windowing. In this method, you pick a two digit date, say 50, and reprogram the computer to recognize any date less than 50 as having the first two digits of "20" and any date greater than 50 as having the first two digits of "19". These may, or may not, work depending on your setup.

Well, how does all of this affect me as an HMA producer?

The first is in the area of business systems. For example, you may have a system to track past due accounts in which the computer subtracts the billing date from the present date. On January 15, 2000 you ask for a report of your past due accounts. The computer would calculate an unpaid bill sent out on September 15, 1999 as 1/15/00 minus 9/15/99 and give you a -36,378. Since your computer may not accept a negative number for this calculation, it may drop the negative sign and tell you the bill is 36,378 days old. How would you like to get that kind of a past due notice? This same scenario could exist in the area of payroll where accumulated vacation time, seniority, etc., not to mention paycheck amounts, are calculated.

Second is the area where technical data is used or stored. Programs used in estimating, bidding, mix designs or anything that would use historical information may be impacted.

Third is the actual physical operation. All asphalt plants are now controlled by computers and a lot of them are still being run by old 286's which are not going to be Y2K compliant. Controls for burners, silos and the like could be impacted. In fact the digital readout on your scale or nuke gauge could indicate an internal clock exists and thus potential problems.

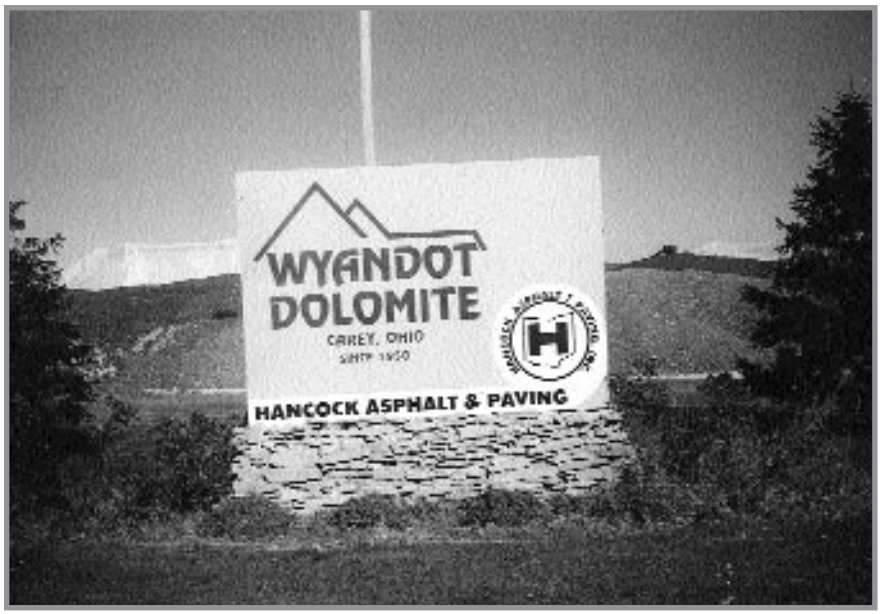
The first step is to inventory all your hardware, software and important PLCs. Next is to check to see if its Y2K compliant. There are several methods to do this. The most thorough is a full simulation test where the user changes the internal computer date to something after 2000 and runs data that requires calculations on either side of the 2000 year. The next level down is the limited simulation test where data is again run that requires calculations on either side of the 2000 year, but the internal clock is not changed. Last is the walk through, where the user "walks through" in his mind the process his computer system is using to look for potential problems. If you don't think you can check it yourself, then you better call in an expert. The important thing is to start now while you still have a year to get it fixed. Don't wait till it's time to fire up the plant in the spring of 2000.

(Member Spotlight, continued from page 12)

Flexible Pavements, Inc., Ohio Aggregates Association, National Limestone Institute, and the National Stone Association. "I'm proud of the asphalt industry," says Herk. "It's nice to be numbered among the people in this industry."

David shares his father's belief that people, both within the industry and the community, are the company's "biggest asset," and feels community support is necessary to change the image of the stone and asphalt industry. "We live in a feel-good society where science and fact don't mean a whole lot," he says, noting that some asphalt companies have had a difficult time moving plants in or keeping plants in certain areas of the state. David sees education as the key to changing the industry's negative image and hopes to adopt a local elementary school to start this learning process. "We've got to educate kids on what we do and how we do it so when they are adults, they'll know that asphalt plants won't harm their kids or environment. We have to let people know just how much we touch their lives, that we do things right."

"It's plain and simple. Roads are growth and you can't have growth without orange barrels."



Providing a significant positive impact on the economy and quality of life in the Carey, Ohio area, Wyandot Dolomite and its subsidiary Hancock Asphalt & Paving Company generate $5-7 million in annual business.

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