OHIO

HOT–MIX ASPHALT

VOL. 9 NO. 1 CURRENT NEWS March 15, 2000

INDUSTRY LAUNCHES ORGANIZATION TO PROMOTE ADVANTAGES OF ASPHALT

A new organization – The Asphalt Pavement Alliance – will soon provide direction and focus for a communications program designed to give the asphalt industry a single voice to deliver its message of superiority in highway construction.

The Alliance was formed by the National Asphalt Pavement Association, the Asphalt Institute and the State Asphalt Pavement Association Executives to bring together the technical, marketing and financial resources of the member organizations and provide direction and focus for a unified industry strategy.

As part of the industry initiative, state Asphalt Pavement Alliances will be established to implement the national plan.

"This is a very positive step for the asphalt industry," said Fred F. Frecker, executive director of Flexible Pavements, Inc. "What has been done is to bring the three major asphalt industry organizations together to identify common goals and work together to achieve them."

RESPONDING TO A CONCRETE INDUSTRY INITIATIVE

Part of the motivation for the creation of the new Alliance comes from a concrete industry national initiative – an initiative that is significantly different from past efforts both in the scope and tactics employed by representatives of the concrete industry.

In 1999, Flexible Pavements, Inc., and asphalt industry leaders nationwide became aware of the American Concrete Paving Association's (ACPA) plans, which are described in detail in this newsletter.

FPI will help lead the asphalt industry initiative here in Ohio. We have already retained public relations counsel to help guide its efforts at the state level, and are currently in the process of putting together a strategic plan.

THE ACPA'S PLAN

The ACPA saw an expansion of the overall market resulting from increased highway funding as an opportune time to increase their market share. ACPA hired the international consulting firm Price Waterhouse to do a market study and develop its marketing plan. The study, which included interviews with each state DOT, led to a recommendation to adopt a strategy which calls for a 15% increase in concrete's market share over the next five years.

The plan calls for dramatic increases is staffing and funding both at the state ACPA chapter level, and at the national level. Total personnel and program cost for ACPA chapters will go from $4.1 million to $10.9 million, while the national ACPA budget for these efforts will increase from $2.9 million to $4.3 million. Money to fund this program is primarily coming from the cement manufacturing industry. Implementation of the plan has already taken place in 15 states, including Ohio.

The plan's actual implementation program centers around eight "strategic projects" which focus on more resources with customers, better tools, and support from ACPA national. The message that the concrete industry has introduced and will reinforce is that there should be a "mix of fixes," with concrete providing long-term fixes while asphalt provides short term fixes.

FPI and the rest of the asphalt industry strongly dispute the "mix of fixes" concept. The bottom line is this: Over 95% of all paved road surfaces in the Unites States are asphalt. Decision-makers at all levels of the public sector overwhelmingly choose asphalt. The private sector almost exclusively uses asphalt. Go into any

Continued on page 2

IN THIS ISSUE:

shopping center, Wal-Mart, Target or other commercial facility and you drive on asphalt. Go to any manufacturing complex and it's the same thing – hot mix asphalt. And it's this way for a reason – hot mix asphalt is simply the best value around. We don't need a "mix of fixes." What we need is the "best fix," and that has clearly been and will continue to be hot-mix asphalt. Now, more than ever, we will have to drive that message home.

ACPA's implementation plan focuses on a series of eight "strategic projects":

- A promotional communications plan, to generate awareness and credibility for concrete. It targets the state departments of transportation, consultants and academia, but goes beyond that to governors, state legislatures and road users.

- Lobbying targets governors, House and Senate transportation committees and appropriations committees, key leaders in the legislatures, state departments of transportation and even the state environmental protection agencies.

- A member involvement program is designed to increase the role individual ACPA members will play in promotion and lobbying and to increase overall membership in ACPA.

- Local road and the street markets, involving a partnership with the Ready Mix Concrete Association targeting county engineers and commissioners along with city engineers, councils and mayors.

- Product and process development is specifically designed to try and counter hot mix asphalt's advantages of speed of construction, ease of repair, and less disruption to the traveling public, by focusing on ultra-thin whitetopping, fast track construction, a warranty program and traffic management processes.

- Education and training addressing concrete paving contractors and employees, DOT engineers and officials, and colleges and universities.

Using this overall national implementation program, separate plans are being developed for each state. These plans look at the specific market in that state, establish a statewide goal, create individualized plans for each of the strategic projects, identify resources and budgets, and set key performance indicators, which measure what has been done in each strategic project.

CONCRETE PAVING ASSOCIATION TARGETS OHIO

The Ohio/Kentucky Chapter of the American Concrete Paving Association is one of the first ACPA Chapters to kick off their industry's new marketing initiative. The Chapter, which is headquartered in Columbus, Ohio, has covered both Ohio and Kentucky in the past but is now being split into two separate chapters.

The Executive Director of the old joint-chapter will now be the Director of the Ohio Chapter. Two additional staff members have been added and the chapter has hired outside lobbying and public relations counsel.

The Ohio ACPA has held a news conference in Columbus, visited some newspaper editorial boards, and stepped up its contact with government officials. The stated goal is to generate public opinion in favor of concrete, which in turn will be used to pressure government agencies to use concrete for road building projects.

"We are a little behind the ACPA initiative at this point," said Frecker, "but by the year's end our organization and plan will be in place and we will be seeing some of the benefits from it." Frecker noted that the HMA industry is much stronger and better organized at the grass roots level than ACPA and with the development of the Asphalt Pavement Alliance we will now have a national effort that is coordinated and unified. This will make our industry stronger than ever.

More details on the Asphalt Pavement Alliance and FPI's plans to address the concrete marketing initiative will follow in future issues of this newsletter.

Hot Mix Asphalt best serves Ohio's motorist

CHEAPER FASTER BETTER

To the citizens of Ohio who demand economy, who are hooked on hurry, and are wanting more for less, the Hot Mix Asphalt Industry asks – "May we serve you?"

No doubt about it - Roadbuilders in Ohio and across the Nation are under increased demands to deliver a product that is economical to construct, quicker built, and longer lasting than the stuff that's been removed. Studies done at various universities and the National Quality Initiative confirm these trends. Fortunately, for Ohio's motorists, Hot Mix Asphalt has a proven record of long term performance, without the need for tearing up highways, keeping freeways free and the public speedily moving on.

Fostoria, Ohio – Asphalt pavement withstands heavy truck pounding.

CHEAPER

Good economy is one of the hallmarks of Hot Mix Asphalt pavements in Ohio. This is evidenced by the **fact** that over 95% of the paved road surfaces in Ohio are paved with Hot Mix Asphalt. One only needs to see the vast network of black ribbons of asphalt that comprise Ohio's highways, and the great many number of commercial and industrial parking facilities to validate this truth. If seeing is not believing, then maybe numbers are more convincing.

A study performed by former ODOT Interstate Pavement Engineer, Willis Gibboney, compared the cost to construct and maintain Hot Mix Asphalt pavements on Ohio's Interstate System with contiguous portland cement concrete pavements. To no one's surprise, and as every highway engineer already knows, the Hot Mix Asphalt pavements had the lowest cost to construct. Not so well known however, is that for the pavements studied, which included all Hot Mix Asphalt pavements 19 years old and greater, the cost to maintain those pavements was less than the contiguous portland cement concrete pavements – blowing away age old myths.

FASTER

Vroom!! That's the sound of stealthy paving. Problem is, no one's ever heard it before. Reason is, while the public is home resting after a difficult day at the office, stealthy pavers are diligently working to build smooth Hot Mix Asphalt roads during the

Continued on page 4

twilight hours of the night. By the time the first rays of sunshine delicately touch their window sills, the stealthy pavers have vanished, leaving a velvety smooth riding surface as the only evidence of their ever being there.

BETTER

Superpave – Stone Mastic Asphalt – Performance Graded Binders – Polymers – Fibers …… The Hot Mix Asphalt Industry around the Nation is experiencing change that is thrusting the Industry forward in its ability to manufacture and place Hot Mix Asphalt to accommodate virtually every application. Ohio too is experiencing the benefits of this sweeping change. In 1997 the Ohio Department of Transportation took a bold and fiscally prudent leap forward by requiring the use of polymer modification in all their pavements heavily exposed to truck traffic. This translates to longer pavement performance and less traffic delay. Ohio can ill afford to allow traffic delays to impede its economic prosperity - especially in today's global economy.

Polymer modified pavement placed in Fostoria in 1993.

New technology has permitted the development and use of tougher and better mixes than previously seen before. Sold on the economy and durability of Hot Mix Asphalt, the Ohio Turnpike Commission is completing its capacity expansion and service plazas using predominantly Hot Mix Asphalt. With higher legal load limits than Ohio's Interstate System, the Turnpike has turned to modified Hot Mix Asphalt to quell any fears of rutting.

A case study of State Route 18 in Fostoria, Ohio revealed chronic failure of conventional Hot Mix Asphalt mixtures due to extreme stress on the pavement from heavy truck use. Using Hot Mix Asphalt containing polymer modifiers and a high concentration of stone, ODOT District 2 remedied their problems in Fostoria. Performance to date has exceeded that of conventional materials by 150%, with no need for pavement repair in sight.

May we serve you?

Hot Mix Asphalt – Cheaper, Faster, Better……

100% Recyclable Too !!

THE SHELLY COMPANY BOUGHT BY IRISH CONGLOMERATE

Existing management to still run company

The Shelly Company, one of Ohio's largest asphalt producers and contractors, has been purchased by Oldcastle Materials Group, a division of CRHplc headquartered in Dublin, Ireland.

CRHplc is a leading manufacturer and distributor of building products and construction materials throughout Europe, North America and South America. Oldcastle, the holding company for CRH's North America operations, is the second largest hot mix asphalt producer in the US. They are also the number 5 US aggregate producer as well as a top 10 ready-mix concrete producer.

The Shelly Company was no small potato. Operations include 3 quarries, 10 active sand and gravel pits, 59 fixed asphalt plants as well as 5 portable plants. Shelly's aggregate reserves amount to over 200 million tons. In addition, Shelly operates 2 bitumen terminals; one on the Ohio River in Gallipolis and the other in Columbus that is served by rail. According to a CRH news release, in the year ending March 1999, Shelly produced 7 million tons each of aggregate and asphalt with sales of $323 million and adjusted trading profits of $46 million after depreciation of $17 million. The Shelly Company, an ESOP (Employee Stock Option Plan) company was founded in 1938 by Charles J. Shelly as a small road treatment business. Oldcastle purchased the stock for $362 million.

Dick Shelly, Chairman of The Shelly Company, and Mark Shelly, President, will continue to run the business as a stand alone unit within the Oldcastle Materials Group. Commenting on the Shelly acquisition, Tom Hill, Chief Executive of the Oldcastle Materials Group, said: "Shelly represents an excellent opportunity to acquire the leading, vertically integrated materials company in the growing southern Ohio and West Virginia markets. Following the $422 million Thompson-McCully July 1999 acquisition in Michigan it consolidates Oldcastle Materials Group's position as a major player in the fragmented Midwest materials market, with significant expansion potential."

Northern Ohio Paving Company is also reported as being purchased by Oldcastle, however no details were available at press time.

OHIO UNIVERSITY TAKES FIRST PLACE IN FPI'S FOURTH ANNUAL ASPHALT MIXTURE PERFORMANCE COMPETITION

Interstate run-off next

The winner of FPI's Fourth Annual Asphalt Mixture Competition was Ohio University. Second place went to Youngstown State University and in third place was Ohio Northern University.

Ohio University has shown steady progress since entering the mixture competition in 1997. Although they failed to place in that year, in 1998, their second year of competition, they placed third and then took first place in 1999. Youngstown State University, last year's winner, captured second place in a tough battle with third place winner Ohio Northern University. Ohio Northern is the only school that has participated in the competition since its inception in 1996 and has placed every year: first in 1997, second in 1996 and 1998, and third in 1999. In addition to their second place finish this year and first place last year, Youngstown State also took second place in 1997, their first year in the competition.

Ohio University will now represent Ohio in an interstate run-off with the state of Wisconsin. The Wisconsin Asphalt Pavement Association also sponsored a mixture competition this year and their winner will be pitted against OU. Judging of the interstate winner will be done by the National Center of Asphalt Technology (NCAT) at Auburn University, Alabama.

The FPI Intercollegiate Asphalt Mixture Competition was instituted to introduce civil engineering students to HMA mix design, identifying those parameters that provide for a good performing mix, and to expose the students to an actual HMA testing and production facility.

All teams were supplied with the same aggregate and were free to use any gradation, mix design, or liquid additive they wished. The students then produced beams for testing in the Georgia Loaded Wheel Tester to determine how well they resisted rutting. This accounted for 30 points of the team's score. Twenty-five points were also awarded for a written report and 30 points for an oral presentation, explaining what the team did and an analysis of their results. The remaining 15 points were for a benefit/cost analysis of the student's mix design versus a standard design.

FPI would like to extend its appreciation to all the producers, laboratories and suppliers who took time to provide information and facilities for the students. A special thanks to Rock Road of Wisconsin who supplied aggregates for all the Ohio and Wisconsin teams.

HMA PAVES A CLEAN PATH

For decades, engineers have used asphalt in many environmentally sensitive projects

As the world population topped 6 billion this last month, environmental concerns challenge industry more than ever before. Some critics have questioned the environmental effects of modern industry and engineering, and the asphalt and road-building industries are often at the center of attention.

Environmentally responsible applications for hot mix asphalt (HMA) have changed the minds of many previous skeptics. In fact, asphalt has been tested and found to be extremely stable. Unlike other compounds, it does not leach into water, contaminate soil or harm fish, according to recent tests by the Heritage Research Group. This allows HMA to be used as a building material in containing potentially hazardous sites, as well as in new construction where the environment is fragile.

Water Reservoir Linings

For decades, engineers have used asphalt in many environmentally sensitive projects. In many states, public water utilities have found HMA to be the perfect liner system for domestic and agricultural water containment facilities. Just recently the California Department of Water Resources completed construction on the 31 million gallon Devil Canyon Afterbay, providing drinking water for metropolitan areas in southern California. The liner system is composed of open-graded and hydraulic (impermeable) HMA in several layers for optimal function and safety. The system's designers chose HMA for its impermeability, durability, flexibility, resistance to weather, and the ability to withstand rapid filling and draw-down cycles.

Asphalt Capping Solutions

In chemical containment applications, HMA is often the most effective and economical option available. In Richland, Washington, The Department of Energy searched for practical solutions to isolate the defunct Hanford nuclear plant. The team of engineers and scientists finally chose a prototype capping system that included an HMA/polymer composite membrane to waterproof the stabilized waste zone.

Continued on page 8

Member Spotlight

Erie Blacktop's Management Team (left to right): Chris Schaefer, Senior Vice President; Chris Walters, Secretary/General Superintendent; Dean Wikel, President

Drive through Erie Blacktop's parking lot and you will see "paving with pride" painted on the back of a pickup. But paving wasn't what John Wikel had in mind 33 years ago when he started his company in Sandusky, Ohio. Wikel's intent in 1967 was to be a material supplier, according to Dean Wikel, John's son and current company president.

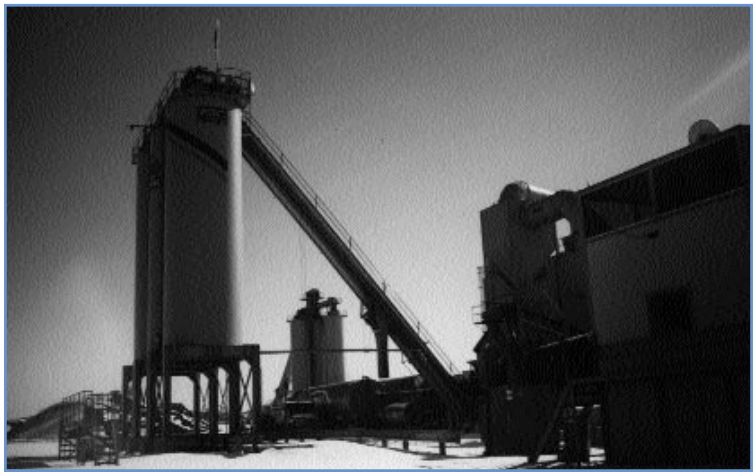
"My dad researched the industry and built an asphalt plant with no intention of doing the paving himself," Wikel said. However, after a short time it became obvious that, to stay in business, the company needed to do more than sell materials. A year later, when Dean got out of the Navy, Erie Blacktop went into the construction and paving business.

"For the first few years, we were such a minute company," Wikel said, adding "we just manufactured our own blacktop and laid it." In 1970 Erie shut down the plant, feeling it was no longer efficient, and for the next six years bought blacktop from other suppliers. The turning point for the company came in 1976 when they purchased 20 acres adjoining their current location. Erie currently has three asphalt plants, which produce between 400,000 to 500,000 tons of asphalt each year, as well as a stone quarry. Two plants are in the Sandusky area and one is in Portage. The company does $20 million annual business within a 50-mile radius of its three plants, and employs 150 during peak season. Erie has its own maintenance shop and keeps on 75 employees year round, including foremen and superintendents.

Calling Erie "the biggest small contractor in Ohio," Wikel said his company has a good mix of government and private work. "We'd like to consider ourselves very capable of doing residential all the way on up to turnpike work. We'll take a $2,000 job if it fits in our schedule, but we also take some that are in the millions." While Erie has four paving crews, it also has crews doing prep and grading work and supplements its fleet of 35 trucks by hiring 15 to 25 brokers daily. Besides blacktop related work, Erie also uses underground crews to put in water and sewer lines.

In 1998 Erie put in a mile-long new runway at the Sandusky County Regional Airport as well as a 12-acre parking lot renovation for a trucking company in Norwalk. The company also does about 90% of the rubberized running tracks for schools in the area. They recently put in the 400-meter all weather running track and walkways for Lakota High School in Kansas, Ohio. "That's just something that we started doing and got good at," Wikel said, adding, "it just turns out we keep getting running tracks awarded to us." All of these projects have earned Erie Blacktop paving awards. Wikel said the company is "turning a corner" and recently got its first turnpike resurfacing job.

Wikel, who has been President since 1981, is assisted by son-in-law Chris Schaeffer, Senior Vice President; Mario Barone, Vice President; and Chris Walters, Secretary and General Superintendent. He credits these men, other longtime employees and his sons Randy and Larren who are also in the business,



Erie's newest plant located at Parkertown patiently awaits melting snow, warmer weather and the upcoming construction season.

with doing the "everyday work" which allows him to "work on special projects. The guys I work with make my job real easy," Wikel said, adding he has "thoroughly enjoyed my job for the last 30 years."

Wikel considers Erie Blacktop a "growth company," but says they are not "crazy about having to grow. We look for opportunities but if they are not there, we try not to force them" One "opportunity" came about in 1985 when a local company who did much of the paving work in the area just quit doing business. "Because of that, we went ahead and quickly built a plant that would accommodate the extra business," Wikel said. That was the biggest single year of growth Erie has experienced.

One of the things Wikel finds exciting is the "ability to try to incorporate different recycled products into our pavements." Erie not only recycles old blacktop but also grinds up shingles from a local shingle factory to add to its blacktop mixes. While Wikel hesitates to call his company a pioneer, he feels Erie was the "first successful contractor in the state of Ohio to incorporate shingles back in the blacktop." Contractors from Minnesota, North Carolina, and Canada have contacted Erie Blacktop to "find out what it is that we're doing and how we're doing it." Last year Erie did an experimental paving project for Oberlin College using a pine tar resin product, and while it "probably won't catch on," it was successful.

"We've probably got more things going on as far as recycling than the average paving contractor," Wikel said, adding that it is a challenge to take products that typically go into landfills and turn them into a usable product. "You can put this product back on the highway and get some good out of it. Then you can regrind the blacktop up again and reuse it again." Wikel also gives credit to ODOT for "having an open mind and foresight to allow us to do that in some instances."

Erie Blacktop is prominent in its commitment to the community. Both Shaeffer and Walters are very visible in the community, donating time and materials such as sand and equipment to school systems, as well as sponsoring Little League teams. For the last four years, the company has purchased the grand champion steer at the Huron County Fair, which is the "honored guest" at the company's picnic in September. Last year more than 500 employees and customers attended the annual event, which the company started hosting fifteen years ago.

Commitment to excellence is central to Erie's philosophy of doing business. "I think it's important to our perception in the community that the customer feels they get 110% for the dollar they paid us." Wikel said. "When you lay blacktop, it's not for life. Every 10 to 12 years, that pavement is going to have to be redone, and we want our clients to call us back. We do everything in our power to make it a good experience for them. We've got a good group of people. We've got a lot of pride in the kind of work they do." This dedication to "paving with pride" is what makes Erie Blacktop a well-known and profitable entity in the construction industry.

Clean Path, *continued from page 5*

At an industrial site in California, environmental consultants chose a hot mix asphalt cap to remedy a soil contamination problem.

"Our design had to ensure that no water would percolate through the soil to the underlying ground water," says a spokesperson for Vallerga Consulting, one of the teams hired for the project. "At the same time, the caps had to be able to sustain the weight of loaded 18 wheel trucks."

To the site owners' delight, the waterproof, hydraulic asphalt cap met both of these goals, and proved more effective and more economical than a traditional soil system.

RAP (Reclaimed Asphalt Pavement)

Nearly 125 million tons of HMA containing RAP are produced each year. It is an environmental, economical and practical alternative to using virgin paving materials. A study by the University of Florida determined that RAP is not a hazardous waste and does not adversely affect groundwater standards.

RAP is primarily used for recycling into new pavements, but it is also ideal for structural and non-structural fill applications. By reusing aggregate materials for HMA use, RAP lowers pavement costs while conserving our natural resources. This makes for a beautiful planet and a strong bottom line for industry.

Asphalt Reduces Environmental Noise

Departments of Transportation in Ohio, Washington, Oregon and California use open-graded HMA surfaces to reduce road noise in heavily populated areas. In addition, the open-graded mixtures provide added durability and skid resistance. Several studies in North America and Europe have found that, compared with dense-graded surfaces, an open-graded design reduces road noise by three to seven decibels. This also reduces the need for sound barriers, which are both costly and visually distracting in the environment. Using that same technology, the Pennsylvania Department of Transportation (PaDOT) constructed the open-graded HMA Blue Route outside of Philadelphia; noise levels no longer disturb the local wetlands and natural wildlife in the area.

HMA ENVIRONMENTAL BENEFITS AT A GLANCE

- HMA can be combined with many types of aggregates to suit each application, from dense, impermeable layers that contain moisture, to more porous compositions that allow the free passage of water for drainage.
- HMA does not leach into water, contaminate soil, or harm fish.
- HMA is inert in the presence of water, imparting no odor or taste, making it ideal for lining drinking water reservoirs.
- HMA can be used with many grades of aggregate, to create asphalt constructions that blend with landscapes, preserving nature's beauty.
- HMA is lower in cost, more flexible in design, and faster to construct than other road building or containment materials.

OHIO CONTRACTORS TAKE HOME NAPA AWARDS

Five ODOT projects win awards

The National Asphalt Pavement Association handed out awards for outstanding quality in construction at their Annual Convention held February 14-17, in Hawaii. Three FPI member companies were in the lineup. The S.E. Johnson Companies, Inc. received awards for two projects, one on I-90 and one on US 36. The Northern Ohio Paving Company also received two awards. Their projects were on SR 14/US 62 and I-71. The John R. Jurgensen Company was the third Ohio contractor to receive an award, which was for their project on I-71. These projects will now be eligible to compete for the Sheldon G. Hayes award, which is given for the best nationwide project after it has been in service for one year.

Two FPI members also received NAPA's Diamond Achievement Commendation for Excellence in Hot Mix Asphalt Plant/Site Operations. The first was the Osterland Company's Plant #1 and the second was Valley Asphalt's Plant #14.

PAVEMENT PRESERVATION: A ROAD MAP FOR THE FUTURE

FHWA,DOTs put more emphasis on preservation

The following article is based upon the U.S. DOT/Federal Highway Administration report "Pavement Preservation: A Roadmap for the Future" which resulted from a national workshop on pavement preservation held in Kansas City in 1998. Contributing to this article are: Jim Sorenson, Senior Construction and Preservation Engineer in the Office of Asset Management, FHWA, Washington, D.C., and Bob McQuiston, Pavement Engineer, FHWA, Ohio Division.

In the previous articles in this series we indicated that we would discuss findings from the national workshop on what steps will be necessary to overcome barriers and to implement a more cost-effective program of Pavement Preservation.

Key Areas for Action

The workshop participants categorized recommendations for needed actions into four essential areas:

1. Create top and middle management support for pavement preservation through a better understanding of pavement preservation activities. Top management backing, middle manager training, and technology transfer throughout the agency leads to broad-based support for preventive maintenance programs.
2. Appropriate funds specifically for the pavement preventive maintenance program. Never underestimate the importance of this action – it drives improvements to traditional programs of Aworst-first@ only maintenance and rehabilitation action. Few highway agencies have broken away from the continuous cycle of worst-first repairs without a dedicated revenue source. Preventive programs and actions make easy targets for budgetary cutbacks, usually suffering first during times of fiscal constraint.
3. Develop performance-based specifications, improved quality control/quality assurance procedures, and readily available, state-of-the-practice training materials.
4. Integrate pavement performance data, including: costs, benefits and effectiveness of preventive maintenance strategies into the existing Pavement Management System. Determination of program benefits and results fosters agency and public support.

1 - Actions needed to create top management Pavement Preservation support.

- Develop a series of seminars to expand management's awareness and recognition of pavement preservation, encompassing both pavement rehabilitation and preventive maintenance programs, techniques and strategies.
- The FHWA, the owner highway agencies and industry should sponsor a national seminar on pavement preservation, with a focus on developing effective programs and strategies. The products of the seminar would be used to develop improved technology transfer materials.
- The AASHTO Subcommittee on Maintenance should team up with FHWA to develop a public outreach campaign extolling the safety enhancements, reduced traffic delay, improved ride quality, and cost benefits of pavement preservation.

2 - Suggested actions to obtain dedicated funding and management support for PM

- NHI and AASHTO should develop a short course to introduce the concept of asset management to the academic community and others. The concepts can be further disseminated through university curricula.
- AASHTO's Subcommittee on Maintenance (through the Standing Committee on Highways), NCHRP, and FHWA should sponsor a seminar to increase awareness of the effectiveness of pavement preservation programs among top-level State and local agency managers.

Continued on page 10

Pavement Preservation, *continued from page 9*

- Establish an AASHTO/FHWA task force to formulate and define data management and analysis and to identify the type of data that needs to be collected and the pavement measuring standards, including pavement distress, ride quality, structural capacity, surface friction or other measurements that need to be used.

3 - Recommended actions to improve the understanding of treatment cost effectiveness

- Highway agencies need to combine pavement management system data with pavement preventive maintenance data and allocate resources for analysis and documentation of pavement preservation benefits and results.
- NHI/industry should develop a pavement preservation short course for mid level managers and decision-makers to address the need for information on pavement preservation and data management activities. This course should build on existing short courses.
- Establish a Web page that would allow highway agencies to access information on current data collection activities and analysis procedures.
- Create public/private working groups to identify and define a research methodology for performance studies.

4 - Actions suggested to improve the state-of-the-practice use of PM treatments

- The FHWA, through LTAP should develop and market short courses and training workshops to improve the knowledge base in the area of pavement preservation.
- State and local highway agencies in conjunction with FHWA should help publicize the availability of knowledgeable people willing to share their expertise with others.

Research

The workshop participants identified additional research gaps noting most existing studies fall short of answering management's most critical questions:

1. Does the treatment enhance performance in any way?
2. Is the treatment cost effective?
3. What is the correct timing of the treatment?
4. What is the best treatment/material to use?

Research studies must address all of these questions in order to provide the information we need to use and promote PP/PM. The traditional shortage of funding and associated lack of long-term commitment in relation to PP/PM-related research has historically hindered the highway community from obtaining and evaluating the necessary data and information to use PM treatments most cost effectively. PM proponents need to emphasize the cost effectiveness of PP/PM research and the need for commitment in both the application and funding of the research.

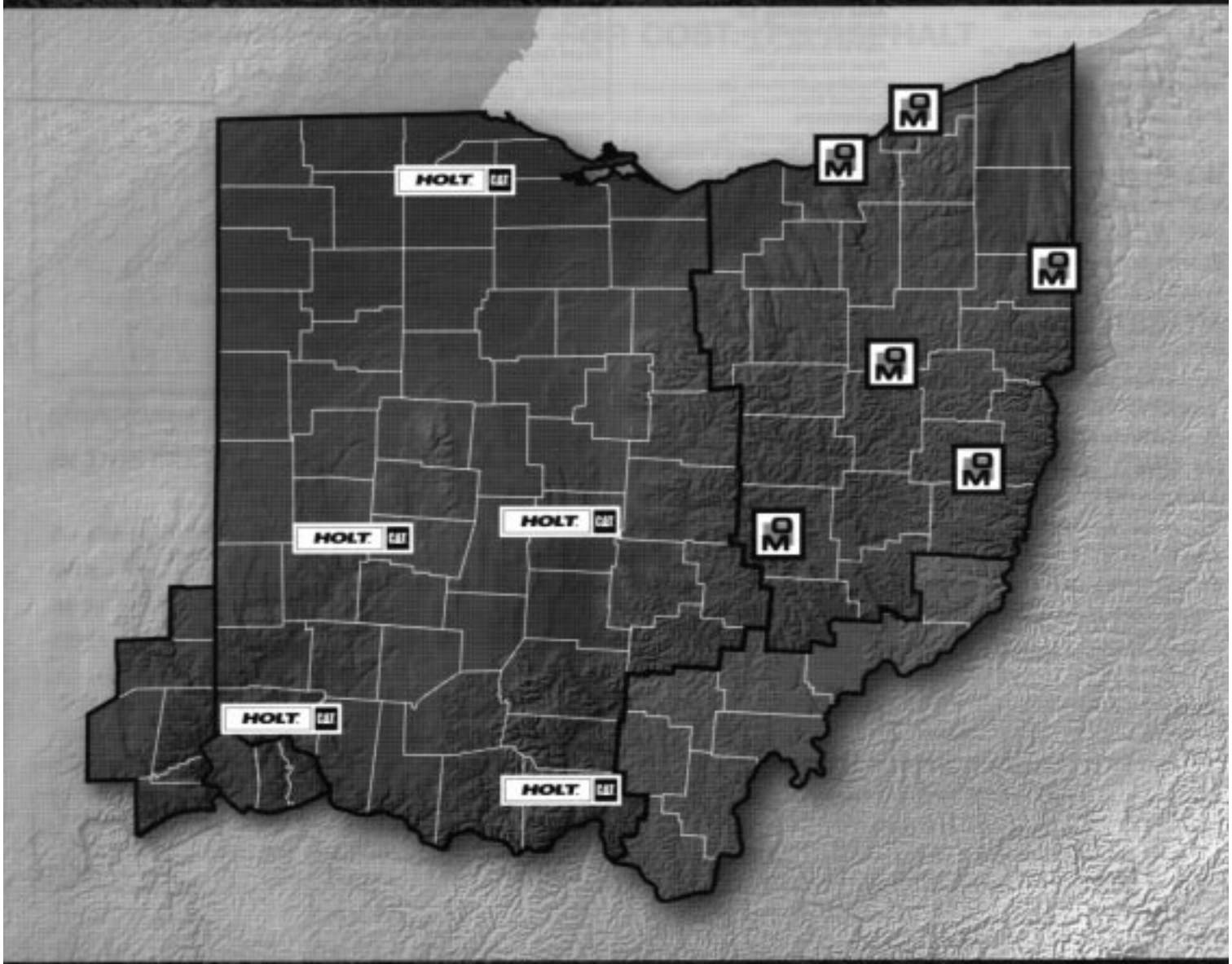
Finally, the participants advocated the promotion of success stories from State and local highway agencies. In future articles we'll try to identify and share some of these success stories with you, particularly those gathered from close to home.

We've Got You Covered!

Countless Paving Equipment Solutions

- One Manufacturer
- 2 Dealers
- 11 Locations

- 395 Service Technicians
- 140 Field Service Trucks
- 176,000 Parts Items Stocked
- 46 Models of Paving Equipment



Your Ohio Cat Dealers

Covering Ohio. Serving You.

OHIO MACHINERY CO.

Cleveland	(800) 837-6200	Painesville	(888) 901-6620	Columbus	(888) 441-HOLT	Toledo	(888) 339-HOLT
Cadiz	(800) 837-6204	Youngstown	(800) 837-6203	Cincinnati	(888) 332-HOLT	Lucasville	(888) 336-HOLT
Canton	(800) 837-6207	Zanesville	(800) 837-6205	Dayton	(888) 330-HOLT		

www.ohiomachinery.com

HOLT CAT

www.holtohio.com

Members

Producer Contractors

Apache Aggregate & Paving Co.
Barrett Paving Materials, Inc.
Black Top Contracting, Inc.
Bowers Asphalt & Paving Inc.
C&S Limestone, Inc. Asphalt Div.
Cunningham Asphalt Paving, Inc.
Erie Blacktop, Inc.
Gerken Paving, Inc.
Hancock Asphalt & Paving, Inc.
Hardrives Paving & Const., Inc.
Highway Asphalt Co.
S.E. Johnson Companies
K&M Construction Co., Inc.
Kokosing Construction Co., Inc.
Koski Construction
McCourt Construction Co.
M&B Asphalt Co., Inc.
Mansfield Asphalt Paving Co.
Melway Paving Co., Inc.
Milestone Contractors, L.P.
Miller Bros. Paving Inc.
Northeastern Road Improvement Co.
Northern Ohio Paving Co.
Northstar Asphalt Inc.
Ohio Asphalt Paving, Inc.
Ohio Tar & Asphalt Div. Central-Allied Entrp.
The Osterland Co.
Sarver Paving Co.
Schloss Paving Co.
Shelly Materials, Inc.
Shelly & Sands, Inc.
H.P. Streicher, Inc.
Superior Paving & Matls., Inc.
Thomas Asphalt Paving Co.
Tri-State Asphalt Co.
Valley Asphalt Corp.
Valley Paving Co., Inc.
Walls Bros. Asphalt Co.

Contractor Members

Henry W. Bergman, Inc.
Bucyrus Road Materials, Inc.
L.P. Cavett Co.
Chemcote, Inc.
Clinton Asphalt Paving Co.
Decker Construction Co., Inc.
Ebony Const. Co., Inc.
McDaniels Construction Corp., Inc.
Northwood Stone & Asphalt Co.
Ronyak Bros. Paving, Inc.
The Shelly Co.
Southern Ohio Paving, Inc.
Strawser, Inc.
Wagner Paving, Inc.
Whitta Construction

Aggregate Producers

Agg Rok Materials
Rogers Group, Inc. dba
Sandusky Crushed Stone

Asphalt Marketers

Amoco Oil Co.
Equilon Enterprises, LLC
Greater Cincinnati Asphalt Terminal
Koch Pavement Solutions
Marathon Ashland Petroleum, LLC
Seneca Petroleum Co., Inc.

Associate Members

A&A Safety, Inc.
A.M.A. Material Supply
Ames Engineering, Inc.
Asphalt Materials, Inc.
Asphalt Systems, Inc.
Astec Industries Inc.
Bituminous Products, Co.
Cantwell Machinery Co.
Caterpillar Inc.
CMI Corp.
Columbus Equipment Co.
Construction Consulting & Testing, Inc.
Craig Pavement Technologies, Inc.
Crane and Tractor, Inc.
Cross-Roads Asphalt Recycling, Inc.
DJL Material & Supply, Inc.
Dillman Equipment, Inc.
Jack Doheny Supplies Ohio, Inc.
Eagle Crusher Co., Inc.
Envisage Environmental, Inc.
Fiberized Products, Inc.
Flat Top Insurance of Ohio
Frankfort Testing Laboratory
Frank Gates Service Co.
GenTec Equipment Co.
Gencor Industries, Inc.
General Insurance Agency, Inc.
Global Road Maintenance Systems
Herman Grant Co., Inc.
Grasan Equipment Co., Inc.
Heat Equipment and Technology, Inc.
Highway Rubber Products Corp.
Holt Co. of Ohio
Hug Manufacturing
Hy-Grade Corp.
Interstate Traffic Control
Kennametal
Key Positioning Systems
Lucas County Asphalt, Inc.
McLean Co.
Manhole Systems, Inc.
Martin-Marietta Aggregates
Meeker Equipment Co., Inc.

FLEXIBLE PAVEMENTS INC.

OFFICERS AND DIRECTORS

OFFICERS

Chairman – James S. Tharp, The L.P. Cavett Co.
Co-Chairman – Dean Wikel, Erie Blacktop, Inc.
Treasurer – Paul Scala, Highway Asphalt Co.

BOARD OF DIRECTORS

Brent Gerken, Gerken Paving, Inc.
William G. Heffner, Agg Rok Materials Co.
James P. Jurgensen, Valley Asphalt Corp.
Richard H. McClelland, Shelly & Sands, Inc.
Charles Rauh, The Northern Ohio Paving Co.
Mike Thompson, Barrett Paving Materials, Inc.
Donald C. Weber, S.E. Johnson Companies, Inc.

STAFF

Fred F. Frecker, President/Executive Director
Clifford Ursich, Executive Vice President
Flo Flowers, Administrative Assistant
William H. Fair, Customer Service Engineer

Meredith Brothers, Inc.
Momentum Technologies, Inc.
Morton International
North Central Engineering, Ltd.
H.C. Nutting Company
Ohio Machinery Co.
PAC Corporation
Performance Site Management
Pine Instrument Co.
Protection Services Inc.
Sharp Testing Services
Solar Testing Laboratory
Southeastern Equipment Co.
State Barricading, Inc.
Tiger Machinery Co.
Toltest, Inc.
Troxler Electronic Labs, Inc.
Ultrapave
VLS-QC Resource Division
Wisconsin Electrical Mfg. Co.

Architects & Highway Engineering Consultants

Adache-Ciuni-Lynn Assn., Inc.
BBC&M Engineering, Inc.
Balke Engineers
Brandsetter/Carroll, Inc.
CDS Associates, Inc.
HNTB Corporation
Kohli & Kaliher Associates
Korda/Nemeth Engineering, Inc.
Mannik & Smith, Inc.
M-E Civil Engineering, Inc.
Resource International
Woolpert Consultants

FLEXIBLE PAVEMENTS, INC.
37 W. Broad St., Suite 460
P.O. BOX 16186
COLUMBUS, OHIO 43216

First Class
U.S. Postage
Paid
Columbus, Ohio
Permit No. 1366